PRIMARY EDUCATION

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EVA D. KELLOGG, EDITOR

CLINGING as little children cling
To hands of parents in the dark,
To the safe shelter of God's Ark;
Bringing our best of everything,
Spelling the page we cannot read,
And waiting till we hear the word.

One month of school. Is any teacher discouraged because this first month has not at all realized her ideal of a school beginning?

A contributor in this number says: "Many a conscientious teacher has fallen into the Slough of Despond by the problems of real life with which every school-room is plentifully supplied. At such times previously endorsed theories are at sixes and sevens. Note-book methods, when brought into contact with long schemes, limited time, and listless children, seem misfits, and the most impoverished form of teaching the only alternative. What is to be done?"

The article, "Needs and Helps," by this same contributor, is full of the happiest suggestions for the new teacher who wonders what the trouble is, that after a month of the hardest work she ever did in her life, she feels so unsatisfied with the result. Read it teachers, not once, but twice, and carefully, studiously, that you may catch the true meaning of it. Then gird up the armor and try it again; "bringing the best of everything" to the children, and "waiting patiently for the word," you are spelling out day by day with every new experience. The light will surely come, and the dark paths will be made clearer. Keep a brave heart.

October is here in all its golden glory. How much of its beauty are you getting into your own heart and how much are you teaching the children to see and *feel* its wondrous charm? This "sunset month" of the year should bring to every lesson in the schoolroom its rare influence of beneficent beauty. Seed-time and harvest could take place without all this marvellous splendor, and let the children see this as a divine gift.

Don't "push things" this month. Time enough for that when the sere and crispy leaves are flying about in the chilly air and children are glad to step briskly on their way to school. Let the charm of this brief season of scarlet berries, painted leaves, purpling grapes, and amber sunshine sink into the hearts of the little children. No lesson in all the books can so sweeten character and mellow the heart as the autumn lesson.

"The world puts on its robes of glory now,
The very flowers are tinged with deeper dyes;
The waves are bluer, and the angels pitch
Their shining tents along the sunset skies."

If there are those who persist in calling these glorious days "sad" and "melancholy," and who find a morbid pleasure in wailing over "fading leaves" and "dying year," don't let the children hear it. As well might healthful sleep and cosy beds be regarded as death and sepulchres as to thus reverse Nature's thought and plan in giving the plant world a chance for rest and sleep. Only a sleep till the spring morning.

More Specialties.

Last month we announced the special treatment of Nature study for the coming year by Mr. Scott. It is with pleasure that we are able to add another and well-known name to our special writers upon this subject. Prof. A. C. Boyden of the State Normal school, Bridgewater, whose writing and teaching on Nature themes have given him a deservedly high reputation, has commenced in this number a series upon the lives and habits of animals, thus ably supplementing other departments of this work.

We are confident that no other educational paper will present such an abundance of clear, helpful, scientific and all-around assistance to teachers upon Nature study as will be given in this journal by these special students of Nature, whose wide investigation has won for them a national reputation.

Primary Geography. No subject more difficult to put on paper for the guidance of primary teachers than the beginnings in geography. For this reason it is with peculiar satisfaction that we announce that Miss Zonia Baber of Cook County Normal school, an expert in this subject, has been induced to undertake the difficult task in these columns. Her successful treatment of this branch of primary work in the summer school at Englewood, (Ill.), is a sufficient guarantee of the good things in store for us. A double installment will appear in this number (owing to the delay of the September manuscript), and so carefully is each advancing step laid out that teachers will find no difficulty in combining the work of the two months and be ready for the November number. Miss Baber does not give this work as an arbitrary course for all, but gives the outline of her own methods for its possible suggestiveness to others,

The Course of Study an Organic Whole.

By A Training Teacher.

THERE have been times in the educational history of these United States, when the school curriculum was like the caldron of a witch; into it material was thrown and the result left to chance. To-day the problem is how to re-adjust, "shorten and enrich," combine and co-ordinate studies, that through them an allsided development of powers and capabilities may be insured.

Studies are but means to an end, and to determine the means we must know the end, *viz.*; to train, to instruct, to give method, and to educate for life. Special emphasis then must be laid upon those subjects that best discipline the observation, discipline the judgement, and so discipline the self-regarding powers as to develop the moral nature. Discipline implies giving power and in order to put "the whole boy to school" the three fold nature must be disciplined, and not as is generally understood, the thought powers only.

In the body the health of one system depends upon another; respiration on circulation, and that upon digestion. Muscle is not independent of connective tissue and all dependent upon the working order of the elaborating organ. In mental as in physical life there is the same interdependence. The fullest exercise of each power depends upon the vigor of all others, and means both objective and subjective must be employed to insure it.

To make the largest contribution to the needs of the greatest number, preference must be given to those studies, other things being equal, as are of the greatest obvious utility; and such sequence should be observed as shall prove the open sesame to all subsequent study.

Every stage of progress should have its aliment;— food fitted to the stage of progress. Because of the few years spent in school by the masses, the most important subjects should be placed first. These subjects may be grouped according to their nature, under five heads: physical capabilities, mathematics, language, science and history; and fit members of each may appear at each successive stage, in due proportion. The boy, then, who leaves school, perforce, at eleven years will carry with him the germ of the many-sided interest so necessary for the fullest participation in the life about him.

Observation lessons in science will have awakened an interest in nature; stories heroic and biographic, may have left an impression which will shape future destiny; the training of the physical capabilities given birth to the craftsman; or the early reading lesson to the man of letters; and the accuracy in reckoning to accuracy in thought and honesty in dealing.

The subject that trains to mathematical accuracy may at the same time give play to the emotions, and this, probably, was the fact in the periods most interesting in mathematical history, when mathematical power was exercised in solving concrete problems concerning the material universe.

The natural sciences on the other hand will not train to courage and endurance however well they may develop observation; and gymnastics will not serve the purpose of history. A study has as many values as uses;— one major and at least two minor values; but no study is without a degree of disciplinary value, the power of the degree depending largely upon the method of presentation. The fullest disciplinary value of a study is often seriously interfered with by the manner, time, and place of its introduction into the school curriculum. To secure the full value of any study the course must form an organic whole.

Of the five great divisions, language, science, history, mathematics, and the physical capabilities, no one can say of another, "I have no need of thee." If a study can be shown to have no relation to other members of the group, it is,— or would be, a strong reason for refusing it place in the sacred circle.

If greater prominence be given to any for its disciplinary value, in the best sense of the term let it be, from the very necessities of the case, to English. Colleges and universities may discuss the comparative value of English and the classics, but for the people and the schools of the people this discussion does not hold. Even in the high school, to which only a small fraction of the people ever attain, any other language than English comes within the reach of very few. So, that, for the mass of American children it is discipline through English or this phase of discipline not at all. It is a thousand years since the great Alfred declared that the English children should receive discipline through the English tongue, and yet to-day few see the beauty and excellence of our literature, the fitness and force of our language, not only for expression, but as a medium for training. A ready use of the vernacular is a prime condition for the successful pursuit of all other study. No other single group can promote the steady development of more capabilites than the languages, and in its due proportion the English language.

The four main things to be aimed at, are, good vocabulary, readiness and propriety in the structure and use of sentences; purity and clearness; quick suggestion of strong, simple forms. In the study of English language and literature, knowledge is never purchased at the expense of power. Education, so far as it proceeds through this instrumentality, is growth and not manufacture,— the school a garden and not a mill,— the feelings are acted upon directly. Language trains the observation and power of classification to a high degree, and in this respect is perhaps second only to botany. It trains the adhesive memory most effectively, and plays no small part in the exercise of the logical memory. In the effort to realize, to form the environment the imagination is exercised, while in judging of precise meanings, precise relations the judgment is constantly employed. In a word it trains all powers more if at the same time it trains a few less.

Foreign language study has all the advantages of the study of the mother tongue with the addition of training the voluntary attention, opens the mind to new and different life, gives liberal culture, and so destroys provincialism, throws light upon vernacular, and gives precision to use of mother tongue. When to the foregoing is added the fact that language, both foreign and the vernacular, admit, even demand, the most perfect co-ordination with all studies, it may be well given first place.

Closely related to the value of language as a disciplinary study, for purposes of the character building phase of education, is history—that subject which, with its colleague geography, makes the whole world kin.

"Judged by New Scales"

The modern school seems to be a force tending to physical degeneracy. It is very hard for a child to sit four or five or six hours a day during eight or ten months in a rather imperfect air, in a rather unphysiological seat, with the strain thrown upon the little muscles which wag the tongue. Nature has made it very hard for a healthy child to sit still; and when we consider that children the civilized world over, and in countries lately civilized, all go to school, we see what a tremendous danger there is that the race will be imperfectly developed. How sad the thought that the race may, indeed almost must, degenerate in its efforts toward the realization of its loftiest ideals. I don't know what you say; I for one believe it would be a thousand times better that the children should grow up in ignorance of all that our schools teach, valuable as it is, than for the race to continue in it peril of physical degeneracy which seems inevitable under our present system. For myself, I say, What shall it profit a child if it gain the whole world of knowledge and lose its own health? Or what shall a child give in exchange for its health? This study of hygiene is setting up a new schedule wherein the work of the school is to be judged by a new standard. The work of the modern school is going to be judged by new scales, I believe, in the next few decades.— *G. Stanley Hall.*

In the physical training of the pupils, play has an influence that gymnastics cannot give.—*Dr. Z. X. Snyder.*

Art Education in Primary Schools.*

By STELLA SKINNER, Supervisor of Drawing, New Haven, Conn.

THE claim for art education in primary schools may possibly seem to some people rather extravagant: there may still be those whose comprehension of the relation of art education to drawing is similar to that of the small boy who, when his mother commented upon his spelling, replied, "Why mamma, this isn't a *spelling* lesson, it's composition;" or of a teacher who, recently, in an exercise in illustration remarked; "Never mind the drawing, this isn't a drawing lesson, it's geography;" but the majority of thoughtful, earnest workers have passed beyond this elementary stage of experience, and have come to appreciate the unity of studies, and to realize that the truest education is that in which the subjects are taught, not as isolated branches, but in their relation to each other, to the child's experiences, and to the development of character.

We have therefore come to feel that if the child is to have an art education or training, the elements of it must be developed and fostered in the early years of his school life.

Art is for the masses, for the glorifying of the common, everyday life of the children of common, everyday people, as well as of the fortunate few.

The bringing into touch with the lives of these countless hundreds of children — many of them the overflow of the oppressed from other shores — the beautiful things of nature and of art; the leading them to see and to appreciate *beauty* in all these things with which they are surrounded, and so to quicken and nourish the vital spark, the desire of beauty that exists in every human soul. For the art idea is the study of things in their relation to each other, and in their bearing upon life, and the expression of this relationship through the medium of human experience and feeling.

"But how can we do this?" do you ask? Simply by infusing the art spirit into everything that we do, into every exercise that we give. It is not *what* but *how* he does that distinguishes the artist from the artisan.

Having, then, this conception of the art idea, how can we bring its beneficent influence into the schoolroom; how can we infuse it into the daily exercises of the children? We are all agreed that the beginnings of art study in the schools should be through types.

The little child comes to school bubbling over with experiences with the material things of his environment; from his earliest infancy he has been surrounded with objects having form, color, and other tangible qualities. The wise teacher will avail herself of this knowledge and interest, and will surround him with a similar environment of familiar objects, and thus lead him through the known and familiar to the unknown; from the particular to the general.

He has long known and loved his ball and his apple; his soap bubble and his little fluffy chicken, and he is delighted to bind up his knowledge of these familiar objects in their common type the sphere; to study their common characteristics and, through a knowledge of the *type* characteristics, to reach out to forms yet unfamiliar.

He is delighted, too, in being led to observe nature's sequence of form; the spherical bud in the spring, the circular blossom, and finally, in the perfected fruit, the return to the original type.

The type solids take on a deeper significance when considered as the medium through which all form may be interpreted. The sphere, typical of natural form, stands for motion and completion; it is the type of the planetary system, moving through space with the least possible resistance.

A little higher in the scale comes the ellipsoid, and still higher the ovoid, perfect in form and proportion, the type of animated life, "the world's cradle." It is his Easter egg, the body of his pet bird, or his own little head. And grouped with these, growing out of man's desire to express his innate love of the beautiful, is the vase form, manifesting his appreciation of each in one harmonious whole.

As the sphere is the type of natural form so the cube stands for manufactured form; for use, stability, repose. Associated with it are the prisms and pyramids, typical of our houses, our chairs, trunks and other familiar objects, which have been made for our use and enjoyment. Give the child two or more of these solids and see how instantly the constructive instinct asserts itself, and how his imagination clothes his creations with delightful fancies. It may be a well that he has made, or a bird house, a piano or a coal box, a cow-catcher or a sliding-hill; whatever he calls it, it is real to him, and around it cluster pleasing associations which the wise teacher will be quick to utilize in many ways. (See "Block City," R. L. Stevenson.)

Standing between the sphere and cube, as mediator, like each, and yet unlike both, is the cylinder, type both of natural and of manufactured objects. Through this form run nature's energizing forces, the sap in the tree trunk carrying nourishment to the leaves, the blood pulsing through our veins with its life-giving power. Man has been quick to adopt nature's suggestion, and we again see the cylinder as type of energy and propelling force in manufactured forms.

Have you ever thought as to the origin of the type? Does nature give us the perfect form or is the type the expression of man's desire for, and striving toward the ideal? Is there not, then, in every object, and infinitely so in humanity, the hidden type or ideal, the possibility of a higher perfection, and the striving toward it? Knowing Mr. Beecher's fondness for flowers, a ragged newsboy once gave him a little faded blossom and Mr. Beecher, in relating the incident said, "In the act I saw, not simply this little faded flower, but the flower that it was in his heart to give."

Could any thought be more beautiful?

Shall not we, then, in our intercourse with each other, and especially in our work with little children, strive to appreciate what it is in the heart to do or to give, looking through the actual to the ideal, and so, by idealizing our real, we may the sooner, perhaps, realize our ideal.

As the little child handles these familiar objects, he is possessed with the desire to express his feeling toward them and this he should be encouraged to do freely and spontaneously, in language, in drawing, and by modelling; and in so far as that feeling and effort to express it are in conformity with the characteristics of the object, his work is artistic.

Parallel with free expression by drawing and in some instances preceeding it, is expression through modelling. The plastic quality of clay lends itself to early creative work; by no other means can the child so *learn* form, and no other medium has greater imaginative and artistic possibilities.

While every class of exercises embodies both the letter and the spirit, the actual and the ideal, no line of work so develops the æsthetic nature of the child as that in color and decorative design.

In speaking to city teachers the value of nature study can not be too strongly emphasized.

Walter Crane well says:

"When we speak of an advance in education, we, too often forget that no education of the schools can compensate for life passed amid hills and woods, and by the sea, itself an education in a lore never to be forgotten."

Mahomet went to the mountain, but we must bring the mountains to us. If we are not able to take our pupils out to nature, we may, at least, bring the spirit of nature into the schoolroom. The little child is so marvellously endowed, heaven lies so near him potentially, that simply a buttercup spray may open to him a vista of open fields, bright sky, birds and balmy air. It *may*, but whether it *does*, depends largely upon the teacher.

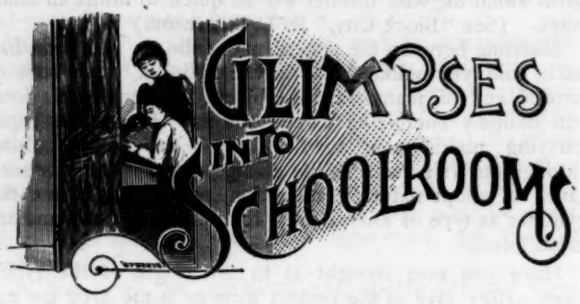
One who lives very near to the hearts and lives of the common people declares, "There is poetry everywhere; everything has something to say, if only someone will open its mouth and let it speak."

And this is the privilege of a teacher; to unseal the lips of these dumb oracles, that they may whisper their secrets to these countless children in our schools.

*Extract from paper read before the Art Section of Brooklyn Institute, (N. Y.)

This, then, is the supreme question:—How can the teacher be led to a full knowledge and appreciation of the the Art Idea in public education? Before it all questions of method or device sink into insignificance.

Only as the soul of the teacher awakes to a recognition of the divine quality of beauty in material things, and of the love of beauty in children's hearts; only as she recognizes both and tries to bring them into fuller harmony, can the spirit of art become real to those for whose best development she labors.



October.

Ay, thou are welcome, heaven's delicious breath!
When woods begin to wear the crimson leaf,
And suns grow meek, and the meek sun grows brief,
And the year smiles as it draws near its death.
Wind of the sunny South; oh, still delay
In the gay woods and in the golden air,
Like to a good old age released from care,
Journeying, in long serenity, away,
In such a bright, late quiet, would that I
Might wear out life like thee, 'mid bowers and brooks,
And, dearer yet, the sunshine of kind looks,
And music of kind voices ever nigh;
And when my last sand twinkled in the glass,
Pass silently from men, as thou dost pass.

— *Bryant.*

Needs and Helps.

By E. J. PHELPS, New Haven, Conn.

THE session was closed and the quiet of empty chairs pervades the room.

"I know my lessons are not conducted in accordance with approved methods," apologetically — almost desperately — remarks the teacher. "Not a child was truly interested in that last lesson. If I only had the time, I should like to make my class-work as bright and attractive as was that we observed in our training course, but with long schemes and indifferent children, nothing but the plainest, dryest kind of work is possible. I am expected to finish the book this term with that class. I shall not be able to accomplish it unless I keep the fact constantly in mind, and drive away at the solid work, leaving out all fancy touches. I used to think I should enjoy teaching, but it has been anything but enjoyable so far, for I cannot accomplish what I wish to — what I feel that I ought to accomplish. And so much is expected!"

Not an unfamiliar tale of woe is this; for many a conscientious teacher has more than once been plunged into this same Slough of Despond by the problems of real life with which every school-room is always so plentifully supplied. At such times previously endorsed theories are at sixes and sevens. Note-book methods, when brought into contact with long schemes, limited time, and listless children, seem misfits, and the most impoverished form of teaching, the only alternative.

What is to be done? We have no power to shorten the scheme. That we must accept as a fixed point; but we cannot bring ourselves to accept as also inevitable, dull class-work, uninterested children, and hopeless teachers. There must be some flexible conditions within our reach. Perhaps we shall more readily find them if for a while we put from our thoughts the bugbear of methods, and simply try to find some road which will lead at least toward the light.

A confident and hopeful manner — real and not assumed — suggests itself as the teacher's first waymark. Indeed, we should like to see this same manner in the children, too. Does it seem as unquestionably beyond us as is a shortened scheme? Take a sober second thought and see that it is not.

Suppose we first do what we can to make the long scheme seem less appalling. It can be separated into daily or weekly fragments, for one thing. Then, too — remembering that teaching is cumulative in effect, that a dozen strong class exercises will help the next dozen to move smoothly — perhaps a little less work than a strictly mathematical division would apportion may be set off for the first few weeks of the term. This would allow more time for attention to details of class-work, and possibly would even admit a few "fancy touches" in teaching. Certainly not a hindrance to future work.

Perhaps, too, the scheme can be separated into independent and dependent subjects. If so, this also shall guide in forming the divisions. The independent shall be allowed the greater amount of time, because in teaching that, ground is being broken for the other subjects. We might suggest right here, that all dependent subjects should be taught as such.

Of course this will require careful thought. And of course our teacher will be sufficiently wise to do her scanning and planning outside of the school-room and of school hours. Having thoughtfully divided her work, she may then — for a time, at least — wholly lose sight of the work in mass. Possibly the habit of carrying into her classes the thought of a single day's work rather than the shadow of the "massive whole" may of itself slightly lighten her burden, and let in a ray of hope. It is certainly worth trying.

We need not urge a thoughtful preparation of each daily fragment of work, for our teacher is conscientious, and will attend to that without any suggestion from us.

Another aid to hopefulness of spirit has already been suggested. Perplexing questions, as far as possible, are to be considered and solved outside of the school-room. If not solved, left there for further thought. Solutions only, and not the problems, as their accompanying anxiety shall influence the class-work. The teacher's burden must be borne by herself and not shared by the children. If it discourage the teacher, be sure that it will benumb the children.

This, by the way, suggests a valuable school-room truth. So closely are teacher and pupil connected in their work, that whatever helps or hinders the one has a corresponding effect upon the other.

Mentally active children is another way-mark, and also a direct aid to the desired hopefulness of class manner. One step toward this requisite of all happy work in the school-room is a thorough grasp, by the children, of each daily portion of work when it is *first* presented. Children will not take an active part in class-work if they feel themselves on unknown ground. And, too, the going over and over a subject once taught, to patch up weak places in the teaching, is apt to exhaust the vitality of teacher, chlldren, and subject. Patching is necessary, but let it come in the right place.

I suppose the habit of working *with* rather than *before* the children is the royal road to thoroughness. What they see, think, say, or do, is a very fair test of what they are getting from the lesson. What is said and done before them is no indication whatever. "With" implies that teacher and pupil are together in *mental action* during the lesson period; that at no time does the pupil fall away from the teacher, or the teacher get beyond her pupil. If "working with" the children be her ideal, the teacher will be quick to sense any tendency toward separation, and as quick in applying the brake to her too impetuous teaching or the spur to the sluggish action of her pupils. And may I kindly suggest that there are stronger inspirations to concentration of mind than the words, "Pay attention"?

This thought comes closely linked to another; "Creation of *desire* in the children." The same motive which prompts the teacher's action can hardly be expected to inspire the children. Their motor must not be so far reaching and comprehensive. Something simple and near at hand will often work wonders with children verging upon weariness or inattention.

Not long ago a class was to be drilled in pronouncing difficult review words. The list was upon the board. The work was introduced with, "Which word seems most difficult?" The class did not know that the lesson had begun, but promptly began to look through the list for the hard word. The teacher's object had been attained before the first answer was given. She wished a brief study of the words, and her innocent question brought it about. I wonder if a plain statement of her wish, "Study these words," would have been followed by an equally general response. Other questions similar in spirit to the first characterized the greater part of the drill. "Notice which of the '*th*' endings is pronounced most distinctly." The point of the lesson — the "*th*" ending — is being emphasized, but the children see in the remark only a challenge to their powers of discrimination and are ready to meet it.

Does this too closely suggest "fancy touches" to meet the approval of our discouraged friend? Possibly; yet by it the teacher has gained prompt and cheerful work, individual effort, and emphasis upon specially needy points. Has she not also saved a certain amount of nerve force which is always spent when children must be *urged* to be attentive and to work?" Will the "plainest, dryest kind of teaching do more? Will it do as much? Such "fancy touches," coming to serve and not merely to adorn the solid work, surely prove their right to an existence.

There are many way-marks along this road to happy, hopeful teaching. We will not take time to look up more of them, but instead will briefly recall what have already been noted.

Needs.

1. Hopeful teaching.
2. Mentally active children.

Helps.

1. Scheme thoughtfully divided into daily sections.
2. Only the daily fragments in mind when with the children.
3. Perplexing questions considered, solved and left outside the schoolroom.
4. Thorough work with each daily fragment.
5. Drill and reviews in proper place.
6. Work *with* and not merely before the children.
7. Arouse desire.
8. Admit "fancy touches" that come to *serve*.

Is this leading back to the impossible methods but a few moments ago denounced by our teacher? Very likely; yet there is a difference. We are not attempting to fulfil the demands of our note-book methods, but merely to meet the needs of this particular schoolroom. Would it be strange if the two should prove to be converging lines?

Very Likely.

A school official questioning a primary class, said to the little five-year-olds, "Answer in concert." Silence following, he asked the teacher what the trouble was. She suggested that possibly they failed to understand his direction. "Very likely," he answered, then turning to the class he proceeded to make his meaning clear by saying, "Answer in unison."

"Position."

"One day, in my school of little ones, we had been having a conversation le son about things we could sit in or on. We had almost exhausted the list of objects, but, as I had one in my mind that had not been named, I said. "*I* can think of something else we can sit in; can any one else?" One little maid raised her hand, and on my saying, "Yes, Alice?" meekly suiting the action to the words, said innocently, 'We can sit in position.'"

October Blackboard Readings.*

(These readings are adapted to second grade, and may be used after the teacher has brought these objects before the class and they have discovered the facts for themselves.— ED.)

Corn.

Corn.

Corn is a very beautiful and a very useful plant. Its long, slender leaves shine like satin in the sun.

Its flowers are made of silk and gold.

Did you know that a corn-stalk has flowers?

It has two kinds of flowers.

One kind is at the top of the stalk.

It is called the tassel.

It is good only to make the golden flower-dust.

You know all flowers must have that to make the seeds grow.

But where are the seeds to grow?

Surely not at the top.

There is no place in the tassel for seeds. Look at the silk on the corn.

Take off the little green husk.

Each little thread of silk leads down to where a grain of corn may grow.

Sometimes an ear of corn has bare spots on it, where no grains grew.

That was because no dust touched their silk threads.

A Milk-weed Seed.

(The "balloon" should be present in the schoolroom.—ED.)

Here is a little balloon.

See how it goes in the wind!

The top part is as fine as silk.

See the little brown basket below.

The little traveler inside is asleep.

His ride will not hurt him.

Neither will it hurt him to come down. He will not even know anything about it

For he will not waken till next spring.

Then he will just creep out of his brown basket and go to work.

Do you know what his work is?

Why, to make more balloons like his own.

He will take care that a traveler is tucked up inside of each basket.

Then next year each of them will start out in his kind of business.

He thinks nothing in the world is so important as people like himself.

So he wishes them to be known far and wide.

They cannot ride in the cars as you and I do.

They cannot fly as birds do.

So he takes this way of sending them abroad.

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*(From "Nature Stories for Young Readers." D. C. Heath & Co.)

(Continued.)

A Chestnut Burr.

(The chestnut burr should be brought to the schoolroom)

See this chestnut burr.
It is soft inside like velvet.
On the outside it has sharp prickles.
Three little chestnuts used to live inside.
This burr was their house.
It was a good house for them.
It took good care of them.
Is that not queer?
Did you ever hear of a house taking care of the people inside?
That is what this house did.
It kept them shut up safe from harm, till they were ready to come out.
The sharp prickles kept people away.
Neither could little Bunny come to get the chestnuts.
When they were ripe, Jack Frost opened their houses.
Then, out they jumped.

Music for Little Children. III.

By KATE L. BROWN.

WHAT principle shall guide us in the selection of our rote songs? How shall a rote song be taught? These questions must be fairly settled in the teacher's mind before any satisfactory results can be obtained.

As the music should be the expression of the child's life, it naturally follows that we choose such material as closely relates itself to the work in hand. This results in a continuity of thought and action, that is very helpful to the harmonious development of the little mind.

If it is always the unexpected that happens, the child is either disturbed,— overstrained, or he passively resigns himself to be played upon by the stronger and leading spirit.

Let the teacher look over her field of work for a term ahead, and consider what are the leading thoughts of these months. What will the nature work be, the literature? What stories in history or mythology will naturally be chosen for this season?

With a plan of work determined on make a careful selection of songs that will still farther illustrate these leading thoughts. So far, so good. But with a collection of songs on hand there are certain other very important considerations.

First, as to words. Is the poem in itself a genuine piece of literature? Could it be used by itself for a lesson or series of lessons in literature? This, alone, is a serious consideration. In the past the chief demand has been in favor of the musical setting. Let the words be ever so weak or trashy, it mattered little if the music was attractive.

We would plead for superior merit in *words* as well as *music*. Remember that every song means also a lesson in literature.

Some teacher may ask, "Must the words of our songs be always from the standard poets?" By no means, for the sound reason that as good material is to be found elsewhere. In these days one cannot take up the leading children's papers and magazines without finding much that is admirably adapted to our purpose.

Then, too, much in the leading poets that is especially fine for literature was never meant to be sung. Lyric poetry is really a distinct department of literature. Some of the bits from the classics suggest music so inevitably that it would be a wonder indeed if they were not set. For example, take Allingham's "Ring Ting! I Wish I Were a Primrose," as full of natural swing and melody as poem could be. Standard literature of the past will give us a goodly share of material, and current literature as well. Let the words be ever so simple, still the rhythm must be perfect and images of purity and beauty strongly suggested.

A word for the music. It must suggest a great variety in light and shade through its choice of intervals. It must be in itself pure melody, able to stand alone without an accompaniment.

The Germans understand these requisites in a most gratifying degree. Take the collections of "Children's Songs," by Abt, Brahms or Reinecke, a golden treasury indeed for the teacher! Do the melodies bear any resemblance to the tiresome little "*do ri mi*" songs, so many teachers consider the natural food of their charges?

We remember of one schoolroom where the energetic teacher had undertaken to plan out a course in music for the entire year. It was really an interesting and curious piece of work.

For a certain period the tones from *c* to *g* alone were to be used, and a number of songs were sung that comprised only the intervals included in this range. Nothing more cramped or dreary could be imagined.

However faithfully we may drill upon the subject matter supposed to be within the child's range, we must not cut off all chance for the "look beyond," which is, after all, the chief motive power of inspiration with old or young.

The songs of this school were fatal in the highest points. Their only object seemed to be the use of intervals between one and five. We longed to take that school in hand and try the effect of Abt's "Were I a Bird," Brahm's "Dörmoschen" or Reinche's "Schnick Schnack." Certain German composers show an unerring instinct as to the cravings of the true child. They give us melody, pure, spontaneous—full of sunshine, movement color. They give us intervals that are natural, beautiful, varied, within the compass of the little voice. They never lose sight of the æsthetic side of this work, which leads to the love of beauty for its own sake — or culture.

Our song selected, how shall it be best developed?

Present first the poem to the children. Repeat it in as finished style as possible. Throw *yourself* into this work. If you do not take a vivid delight in it, do not expect your children to do so, Talk about the various little points suggested by the lines, and relate them to the children's experience. Make as vivid a picture as possible — sunny, magnetic, helpful.

After a while let the children repeat it with you. Be careful of the various points of expression, yet let the whole be natural, easy and childlike. When this is accomplished sing the song and notice how it impresses your small auditors.

If you have been careful in your presentations, they will, long before this, be very anxious to learn the song. Do not delay this step too long, lest the tide turn and interest decrease. Sing it line by line until the children have mastered in all its details, a single verse, and can follow with you. Repetition will fix this work.

Much is to be said concerning quality of tones and the proper vocal exercises to be used.

As this relates equally to the note-singing, a thorough discussion of these points will come in the fourth and concluding paper.

All Alike.

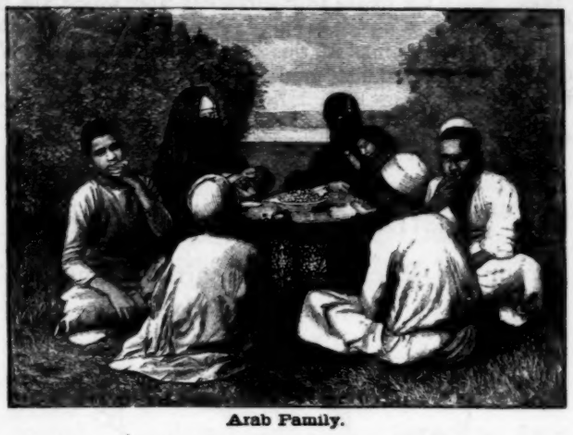
Are we really trying to turn out fifty thousand clothespins, of precisely the same pattern, in the schools, or are we trying to make of each boy and girl the best that can be made, and to encourage as we can the particular genius of each separate child.— *Edward Everett Hale.*

Some of our grammarians have a great tendency to put up our sentences in bologna form.— *Dr. Z. X. Snyder.*

If your lessons do not go beyond your school work they are a failure.— *A. C. Boyden.*

THE LAND OF THE ARABS. 67

We camp to-night near this well of cool water. In the early morning we are off again, and at about ten o'clock we reach another well. Here we rest till the sun is low.



Arab Family.

Days pass, and we are still in the midst of the burning sands. Now the wells are far apart, and we must carry water in bags made of camel's skin.

It is noon, and we have halted for the day. How the sun beats down!

See the dust whirling towards us! What is going to happen? The camels are burying their noses in the sand.

We must be quick, or a hot whirlwind will reach us before we are ready for it. Place a piece of cloth on the sand, and press your face hard down into it. While the hot wind is passing, you must breathe the air that is in the sand.

Now the wind is here. We are stifling! It seems as if hot coals were burning our bodies. The whirling sand almost buries us. Five minutes pass. They seem like hours. Now the camels are raising their heads, and the storm is over. This is the *simoon*, or stifling wind of the desert of Arabia. Where is this desert?

As we travel over the hot sand, clouds of locusts fly about us. They look like grasshoppers. Bees and wasps swarm upon the rocks that jut out of the sand. Countless scorpions, with poison stings, creep over the dry surface.

The plant life is scanty. The camels find a few tufts of coarse grass, sharp thistles and cactus plants.

Our route now leads over higher land. Here and there we see tents pitched under spreading date palms. In the distance low mountains rise on the plain. To-morrow our journey will end.

Here we are at last in a land of flowers! It looks like a vast island-garden in a sea of sand. Mile after mile of groves and grainfields stretches away to the south. This is the land of the Arabs.

Should you like to go to school with these Arab boys? They are reading the Koran, which is their Bible. Listen to the strange words which tell them not to press wine from grapes. In all this fair land no wine is made from grapes, but the fruit is eaten.

The Arab boys are dark, but they belong to the white race. Have you not seen boys that look like these?

School is over for the day, and our little friends will show us their homes. First we must see the horses.

How the Arab loves his horse! He oils its hoofs so that the hot sand will not crack them. He chooses for it the finest grass and the purest water, and often feeds it on dates and barley. He places no cruel bit in its mouth, but guides the noble animal by pressing his knees against its sides. The Arabs have the most beautiful horses on earth.

Arab School.

From Frye's "Primary Geography." Copyright, 1894, by Alex Everett Frye. Ginn & Company, Publishers.

The World.

"Great, wide, beautiful, wonderful world,
With the wonderful water round you curled,
And the wonderful grass upon your breast—
World, you are beautifully drest.

You wonderful Earth, how far do you go,
With the wheat-fields that nod, and the rivers that flow,
With cities and gardens, and cliffs and isles,
And people upon you for thousands of miles?

Ah, you are so great and I am so small,
I tremble to think of you, World, at all;
And yet, when I said my prayers today,
A whisper inside me seemed to say,
'You are more than the Earth, though you are such a dot;
You can love and think, and the Earth cannot.'"

Letter from the Grammar Grades.

Dear Editor:—

Because your paper is becoming a recognized standard, and because it is coming to be said that PRIMARY EDUCATION is always to be found among the better class of teachers, I want to say a few words through its columns to you and to its readers.

Literature for children — what shall it be — or, rather, in what style shall it be written for their reading? There are juvenile writers among us that go to both extremes. Some that would modernize Chaucer (whose very charm *is* his epoch!) paraphrase Shakespeare's most eloquent monologues, and Americanize the orations of Cicero. That is one extreme. But there are other writers who would hold that the original flavor is to be preserved even at the cost of the child's future habits of speech, his grammar and his rhetoric. Two illustrations of this last, have come to my notice within a day or two. In a certain little Primer sent out by one of Boston's leading publishing houses, it is the evident intention of the compiler to preserve the "original." Therefore we find upon its pages such lines as these:

"I saw a ship *a sailing*."

"The clock struck one
And down he *run*."

"He *took ill* on Thursday."

"I went *a fishing*."

"How shall we *get* rid of her."

"How many have I *got?*"

"A farmer was about to die *and* he knew his sons were lazy."

Now this last sentence brings to me the second book I have in mind;— sent out by another of Boston's prominent publishers. The book is made up of selected Fairy Tales, and selected so carefully are they, with such consideration of their subject matter, their moral significance, that one in reading commends the book heartily, and feels how safe little children must be in the hands of such a teacher as this compiler is known to be. But in this book, here, there, and everywhere, are those clumsy sentences which mark always the *translation*. For example we find:—

"As he fell he was changed from a Frog into a handsome Prince with beautiful eyes who, after a little while, became her dearest playmate."

"These words frightened the water animals, and they brought up stones on all sides and at last came a fat old frog who had the wonderful stone in her mouth."

"In olden times there lived a King and Queen who wished, day by day, they had children, *and* yet never a one was born."

"Meantime the young Queen was more and more anxious and sad because her husband did not return, *and* just then the other brother came into her kingdom."

Now the above sentences may be literal translations; they may be German idioms; they may be what the children like; above all, they may be natural child language. But one thing is sure,— the style and construction of such sentences impresses itself upon the child mind (if physiological psychology is true!) and it is to such, perhaps, that we grammar and high school teachers may trace the wretched, weak, wandering style of composition we find in our pupils, and against which we fight even till the final graduation day dawns. A child naturally uses *and*, where *who*, and *when*, and *where* and other such connective words should be used both for force and for elegance. But because it is natural, shall he be encouraged in it? A primary teacher strives, we are told, to build up in her children a habit of speaking and writing in short crisp sentences.

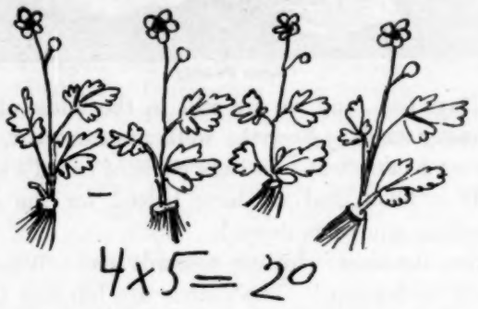
The grammar and high school teachers preach the force and beauty of contrasted parts of a compound sentence; we drill and drill upon antithesis, balanced sentences—for such make a clear forceful style, we all well know. *There was once a man and he traveled a great deal*, is childlike—very; but is it commendable or is it at all to be encouraged? Does it help the child in future composition? Would we like children to make such sentences? And shall we perpetuate such forms in our supplementary readers for little children?

For my part I say *no*. And I think other grammar and high school teachers will agree with me that no part of our language and composition is so hard as the breaking up of this habit pupils have acquired from just such reading as the above quoted book—the habit of stringing together with *ands* clauses which are *unlike in construction* and which are not *continuous in thought*. Will not some primary teacher write what she thinks of this point I try to make? Will not some sister grammar grade teacher bear me out in what I say?

GRAMMAR GRADE.

Illustration Demoralized!

From the Blackboard at Martha's Vineyard Summer School.



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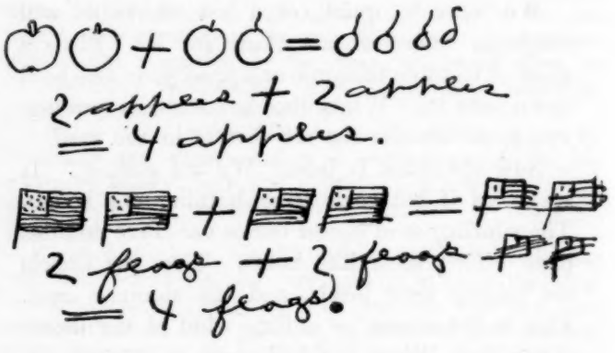


In Number, illustrative sketching may help to bridge the gap between the concrete object and the abstract idea. The sketches should be so simple, however, that idea of *number* will be dominant, not ideas of form. To require children to sketch from buttercup plants complete — roots, stems, leaves, buds, with one flower of five petals on each, to teach four times five, is about as Chinese as burning one's house to taste roast pig! Then, too, complicated sketches tempt to carelessness. Compare the first flag with the last! Even the simplest sketches are not altogether guiltless. Compare the first apple with the last! This equation reads, two apples plus two plums equal two half notes! — *Henry T. Bailey.*

What to "Ingage" in.

A teacher who asked a girl to purchase a grammar received the following note from the little girl's mother: "I do not desire that Matty ingage in grammar, as I prefer her to ingage in more useful studies, and can learn her to write and spaak proper myself. I went through two grammars and cant say as they did me no good. I prefer Matty to ingage in German and drawing vokal music on the peano."

Thou Workest Never Alone.

Go make thy garden fair as thou canst,
Thou workest never alone
Perchance he whose plot is next to thine
Will see it and mend its own.

—*Robert Collyer.*

The Primary Teacher and the Big Boy.

By ELIZABETH SHARE, State Normal School, Winona, Minn.

NO question of school management is more difficult to solve than that of the relation of the primary teacher to the "big boys" who pass to and from their rooms through the hall from which her room opens. All principals or superiors have met the problem somewhere in their experience. The time often comes when an adjustment of affairs is necessary. Then justice demands that we look at the matter from all sides.

The teacher's side is the one with which we are most familiar. It is usually to young teachers that this difficulty presents itself. Such an earnest young worker may have gained power over the little children directly under her control. *They* do not stamp through the hall nor down the basement steps, even when she is not looking. If such a thing does happen, a word or look will bring the culprit to willing obedience. But far too often the "up-stairs" boys come down with a *thump* on each step, even if she is looking. What *would* they do if she were not at her post? Reproof to them is answered by, sometimes, impudent muttered words; sometimes by looks yet more impudent. Ought they not to have obeyed as readily as her own pupils? They know she has charge of the lower hall. Often this disturbance will occur through sessions. Then it is still more temper-trying. The boys are sometimes reported to their respective teachers. It is too often true that the next time the occasion arises for the disorder, it occurs in even worse form; for now it is done with an air of bravado and a yell of triumph at the outer door. It is not to be wondered at that this young teacher grows to feel these boys her sworn enemies and their teachers indifferent lookers-on in the struggle.

Now the boys' side. They have a side — they always do. To be fair-minded we must listen to it. To begin with, *we know* and *they feel*, perhaps, without *knowing* it, that they are at the awkward age. Their mothers have told them so often enough. It's the age when boys are not often wanted in parlors, but it's better for the furniture that they stay in the kitchen or out-of-doors. Their feet someway seem to be too large in proportion to their bodies.

Perhaps they don't realize all this, but altogether, they're uncomfortable. This is also the time in life when authority is most resented; the liberty of manhood, from their standpoint, consists in "doing as one pleases." Of course they obey their own teacher; she's their teacher; *she* has a *right* to say what they shall or shall not do. But as for that "baby teacher on the first floor — think I'll mind *her?* No, sir." Or, "She jumps on a fellow so. I happened to stumble the other day, and she looked as though she didn't believe me when I told her it was an accident. She's not *fair.*" Or yet again: "My! doesn't she like to show her authority? She orders us around as she does the little children."

Not model, gentlemanly boys who will think or talk in this manner? Certainly not; but average, human, half-grown specimens. We have to take them as we find them. We are not now speaking of the notoriously bad boys who are found in every school, but of the ordinary, trying, provoking ones who fill our upper grades.

The teacher certainly has the *right*, from several viewpoints, on her side. Her authority *must* be respected. Order in halls and on stairs is absolutely necessary to preserve the general good discipline of a building. Boys must be trained to give prompt and willing obedience to all in authority over them.

The boys, while they have not the right on their side, yet illustrate by their conduct several facts that in most such cases cannot be denied.

Boys are keen. They often discover traces of love of authority in a young teacher of which she may be utterly unconscious. Experience has not yet shown her that authority is not the rock upon which to rest discipline. These sharp eyes will also often discover the little air of importance which invests a young teacher. Of course to them it has absolutely no weight; it's only "putting on airs" in their eyes. Or there may be yet another discovery to be made. A teacher without the love of authority or air of importance may be *afraid* of these terrible boys. That is the worst condition of all; for what boy will meekly endure a woman's timidity?

Now for the adjustment of such a matter. How shall it be done? No principal can settle it absolutely; it must rest ultimately between the parties most interested.

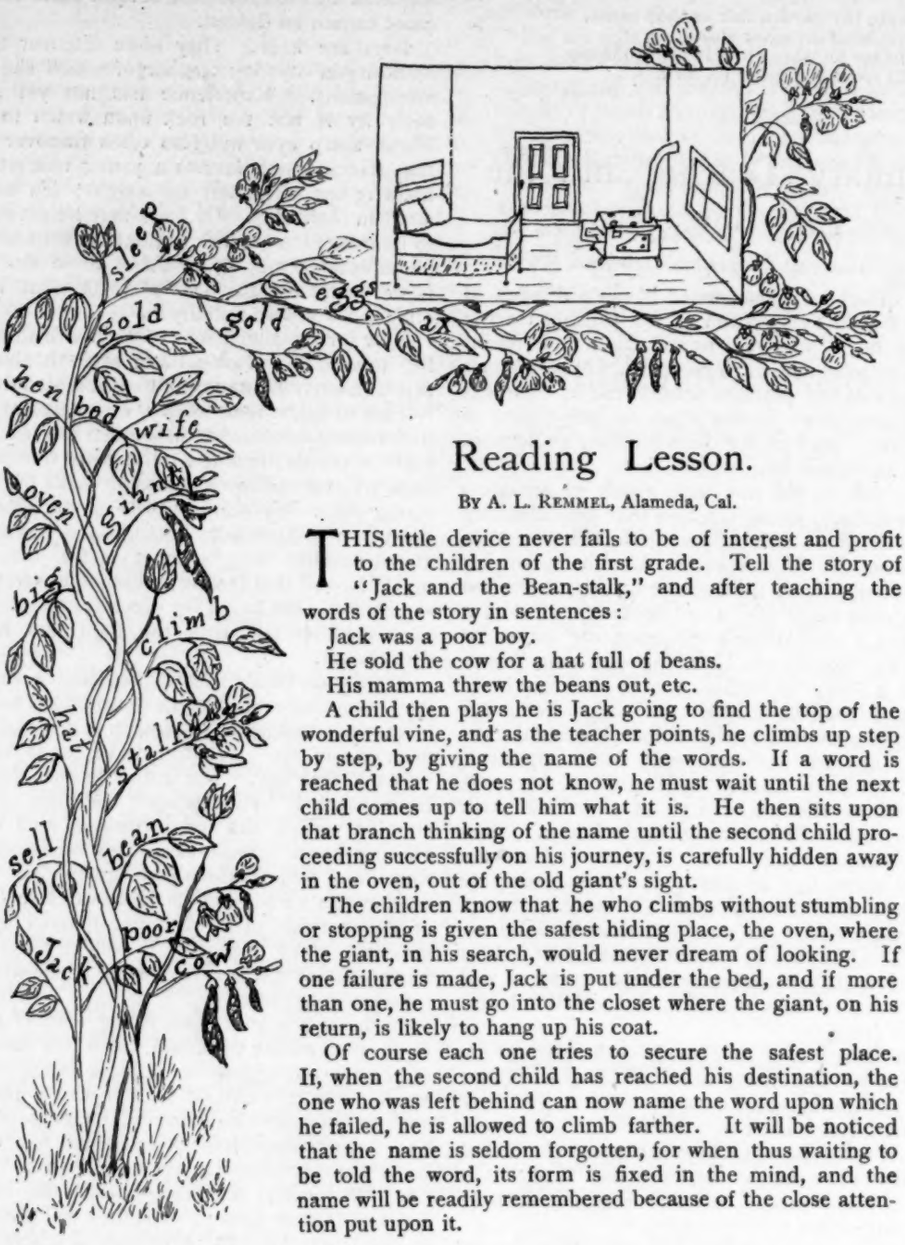
First of all, it is necessary, very necessary, that the most harmonious relations exist between the teachers of the boys and the primary teacher. The older teachers should be the ones, by every possible means, to make the way easy for the young ones. By kindly words as the morning may bring them face to face — by tactful suggestions — the inexperienced teacher may be made to feel that she has friends up-stairs, and that feeling will make her free to — let us not say *report* — but to *tell* the older friend of her trouble, and then together talk over the boys that have caused the disturbance.

From such kindly friendly conference the young teacher may learn one very valuable lesson for a primary teacher to learn, *viz.:* that a boy of sixteen is a very different creature from one of six. Accordingly he has to be managed in a very different way. The authority that controls him must be concealed. The firmness that never flinches must be coupled with a dignity of manner that compels respect. His manliness in most cases can be appealed to by quiet tones and with reasonable words. No study a primary teacher can pursue will be more valuable to her than that of the methods of discipline employed by the successful grammar grade teacher. It will give her an insight into human nature which is invaluable if she wishes to grow and broaden in her work.

From such a study the young teacher ought to resolve upon some course of action which will make *friends* for her of the most troublesome of these boys. There are many errands that they can do for her which her pupils cannot, such as straightening curtains, hanging pictures, and the like. Often opportunities come for her to ask them to bring her specimens for her nature work. Or, happy ignorance that would take her to them for information about habit of bird or flower! Or, they will always be interested in simple experiments in physics or chemistry the teacher may be arranging for her class. Invite them into the room to see a new chart that has just been finished, or to show them the work of some little brother or sister. If this invitation comes *after* a particularly noisy stamp in the hall, ten to one the feet will be held in control for the remainder of that day, at least.

Any young girl who has a purpose in life, who is earnest, enthusiastic, lady-like, and neat in personal appearance, can by some such means as the above, touch the spirit of chivalry that lives in every "big boy." Step by step, she may lead to the point where a frank, friendly talk upon the subject that troubles her in their conduct, is possible. When once this can be reached, the difficulty vanishes into the air, and the young teacher is wiser by far than if it had never occurred, and the boys have gained the new ideal it may be to them, that even a young primary teacher has character and womanly dignity, and is, therefore, entitled to their respect and courteous treatment.

John, three years old, was told the story of the flood including the bow set in the sky. "Where are the arrows?" he asked. Weeks after he saw heat lightning flashing in the west. "See, mamma!" he cried, "there are God's arrows!"



Reading Lesson.

By A. L. Remmel, Alameda, Cal.

THIS little device never fails to be of interest and profit to the children of the first grade. Tell the story of "Jack and the Bean-stalk," and after teaching the words of the story in sentences:

Jack was a poor boy.

He sold the cow for a hat full of beans.

His mamma threw the beans out, etc.

A child then plays he is Jack going to find the top of the wonderful vine, and as the teacher points, he climbs up step by step, by giving the name of the words. If a word is reached that he does not know, he must wait until the next child comes up to tell him what it is. He then sits upon that branch thinking of the name until the second child proceeding successfully on his journey, is carefully hidden away in the oven, out of the old giant's sight.

The children know that he who climbs without stumbling or stopping is given the safest hiding place, the oven, where the giant, in his search, would never dream of looking. If one failure is made, Jack is put under the bed, and if more than one, he must go into the closet where the giant, on his return, is likely to hang up his coat.

Of course each one tries to secure the safest place. If, when the second child has reached his destination, the one who was left behind can now name the word upon which he failed, he is allowed to climb farther. It will be noticed that the name is seldom forgotten, for when thus waiting to be told the word, its form is fixed in the mind, and the name will be readily remembered because of the close attention put upon it.

The Reading Lesson for Seat Work.

SEAT work should be, not only attractive, but profitable, and so arranged that it will supplement and help the work done in recitation. Let us suppose that the new word for to-day's lesson is *basket*. After the object has been talked about, the word written on the blackboard and used in sentences which are read by the class, they are ready for seat-work. First have them copy the work a number of times upon their slates, then draw several pictures from the object itself; next make an outline of the object upon their desks with shoe-pegs and match-sticks. The drawing and stick-laying have afforded them change and rest, and they are ready again for the copying. Now have them copy a short sentence containg the new word.

1. Write the words of your last reading lesson in columns, making four columns.

2. Arrange the words of your last reading lesson alphabetically; that is, copy first those words that begin with *a*, then with *b*, and so on.

3. Arrange the words of your last reading lesson in columns, placing in the first column words of one syllable, in the second, words of two syllables, and so on.

4. Arrange the words of your last reading lesson in columns, placing in the first, words of two letters, and in the second, words of three letters, and so on.

5. Copy from your reading lessons all the words beginning with capital letters.

6. Copy from your reading lessons all the name words.

7. Write on your slate the number of lines in your reading lesson.

8. Write on your slate the number of periods in your reading lesson; the number of commas; of question marks; of semi-colons; of hyphens; of apostrophes.—*Sel.*

Through Magic Spectacles. II.

By THE EDITOR.

"My grandmother sent me to school, but I looked at the master, and saw that he was a smooth, round ferule, or an improper noun, or a vulgar fraction, and refused to obey him. Or he was a piece of string, a rag, a willow-wand, and I had a contemptuous pity. But one was a well of cool, deep water, and looking suddenly in, one day, I saw the stars."— George William Curtis, in "Prue and I."

Attendance.

"We've been the banner class in attendance ever since school opened this year," triumphantly exclaimed Miss Perry, during the recess leisure, when the teachers in the building had gathered in the hall for a word or two together. We have averaged 98⅘ per cent every week, and we should have been up to 99.5 this week if Johnny Greene hadn't sprained his ankle and couldn't get to school. His mother said he fretted himself into a fever because he had spoiled our per cent this week. Well, I am sorry for the ankle, but I am afraid the children thought more about the loss of the banner this week, than they did of the pain of the ankle,— they have got so worked up about attendance."

The other teachers were accustomed to Miss Perry's positive manner of expression, but one of them smiled a little ruefully over the half-envious excitement she had created, and said: "I called at Mrs. Greene's this morning on my way to school, for Johnny is one of my Sunday-school scholars, and I felt anxious about him, he is such a nervous child."

"Well, how is he?" asked Miss Perry. "Will he be long away from school? I hope not."

"The doctor says the sprain is a severe one, and that he will be kept back by his restlessness over this absence from school. He is sure all the boys will blame him for spoiling their per cent. The first thing he said when I entered the room was, 'Miss Nutter, *will* they lose the banner because I can't come?' I wish you'd write him a little note to quiet his worry. He talked in his sleep about it last night and begged of the doctor to have him taken over to school while the roll was called in the morning, and then he wouldn't be counted absent, even if he didn't stay."

"Yes, I will, certainly," said kind-hearted Miss Perry. "But I *do* hope he won't have to stay away long."

The bell rang and the teachers dispersed.

Through Magic Spectacles.

"Doctor, you must give that child a quieting powder to-night or he'll make himself down sick worrying about that school. He heard the boys in the street to-day, and he began to tremble as soon as he heard them shouting. He has got it into his head that the boys won't like him any more because he spoiled their record at school."

The doctor looked up in a half-surprised, half-indignant way, and said, cynically: "I wonder our schools don't try to manage the Almighty Himself," and turned away to the restless child with a kind touch and merry word that were better then medicine.

The principal of the Harwood School was a man with hobbies. He had "ideas." He was determined that *his* school should lead the city in the matter of attendance. "Children could come to school if they wanted to." He held teachers' meetings and talked "attendance." He visited the rooms, searching only for the empty seats, and asked anxiously for the "attendance," rubbing his hands with triumph at every fractional gain that led toward the dizzy height of 100 per cent. In short, he pulled the string of competition till every teacher and every child felt overstrung as if something would have to snap soon. The children came to be regarded as so many little machines to be wound up at home every morning at a certain hour, and warranted to run till they reached the school and the attendance was taken. After that there was a lull. The nerve tension dropped. Rome was saved or lost for that day as the case might be. After that such commonplace, everyday work as the training and nurturing of these little souls, could go on unwatched. He had done *his* duty. He had given them the all-important start in the morning, and it was a pity if they couldn't take care of themselves after that.

There *is* such a thing in this world as a sense of relative values.

A Way to use Educational Journals.

By L. C. E.

WE often hear of great men who seem to have their brain divided and subdivided into little compartments where knowledge is stored all classified and ready for use. A very happy person must such an one be who carries his encyclopedia with him.

Of course all would-be progressive teachers take one or more educational papers. The paper is taken up at night when the teacher is, perhaps, over-weary, the pages hastily scanned — as a matter of duty — and laid down, nothing available having been found for her class at that time. In a few days or weeks the paper is carefully filed away, where it remains unopened and untouched until the year's file is removed to make room for something else, or the next year's edition. Or perhaps she sees something that might be used later, and intends to remember it, but when the subject comes up she has either forgotten the article entirely, or hasn't the time and patience to look through the numbers to find it again. So she grinds through in the old way, or tries an experiment that proves a failure, when that very article penned by an experienced teacher would have smoothed the path of many of its difficulties. And after a while she begins to wonder if it isn't a waste of money and time to subscribe for teachers' magazines; and it *is* if they are used in this way, which the writer knows is the case in many instances.

Of course it is well understood that the province of an educational magazine for teachers is not to furnish lessons to be copied (few could be copied). But because the lessons are founded on pedagogical principles, there is something in each which will help the young teacher to plan her lessons wisely, and a broad application of the underlying principles will bring her work to a higher plane and fill her with enthusiasm for her work, thus accomplishing the work designed by educational publications.

For several years I got from my journals an inspiration for a brief time only, but now that I have learned how to use them I get much from them for everyday use as well as an inspiration that is growing rather than fluctuating.

I procured, first, two large and well-bound note-books and portioned off a part for each branch taught in my school, heading each "Devices in Geography," "Lessons on Minerals," etc. When my papers come I read carefully, then clip all lessons that impress me as valuable, either for the matter contained or manner presented, and paste in my book, leaving space for observations. Under "Miscellaneous Subjects" I have many lessons that are not feasible for my present grade or class, as a whole, but from which I get materials that brighten up the routine work wonderfully.

Amen, to this suggestion.—ED.

Her Majesty, October.

Her herald is the sumac, with its banner rays of flames;
"The carnival is coming," its crimsons now exclaim.
The color-box of Nature spills its glories all about
The feet of august Summer at her stately stepping out.

The Frost King greets her with his touch, as she at will retires;
And straight her emerald tapestries are shimmering with fires,
The forest belts are jewel-clasped, its crowns are ruby tipped,
And vineyard ambers melt in wine that seems like sunshine sipped.

. . .

She rules by right of beauty that our worship quick compels;
We love the spring and summer, and the winter's clinking bells;
But Her Majesty, October, makes the careless hearts devout,
And we bow in silent reverence at her regnant marching out,

. . .

December writes in silver script; November traces gray;
In tender lines of green are seen the autographs of May;
Fair June will tell her secrets in the flush *couleur de rose*;
While April dashes teardrops on her story as it goes.

But Her Highness, bright October, sketches signature in gold
From the hillside to the valley, and across the sunset wold;
The marigolds and asters, with the plumes of goldenrod,
Set forth the splendors of her state at her imperial nod.

We sing in all the other months, but in October gay
The very singers are the ones who turn aside to pray;
Such glory shrines religion; souls inspirations take,
Thus buoyed to adoration as if an angel spake.

— *Emily Gilmore Alden.*

Color. II.

By Henry T. Bailey, State Supervisor of Drawing, Mass.

THEY tell us that color is "the sensation caused by one or more of the homogenious luminiferous waves of the all pervading ether of the universe impinging upon the retina of the eye." You may "put that to soak" if you like, meanwhile remembering that to a child, and to you, a buttercup *is* yellow. You never think of a buttercup as a flower the surface of whose petals has the power of reflecting only ether waves a forty-four thousandth of an inch in length, moving at the rate of five hundred trillions of vibrations per second! For us all color is practically an objective fact, not a sensation, and we never question the intelligence of a person who tells us

"The rose is red, the violet blue,
The pink is sweet and so are you."

although well knowing that every statement is altogether untrue and unscientific.

If you care for a jolly bit of discussion about subjective and objective color read the first three sections of chapter twelve, Modern Painters, volume three.

Now if any child should ever be so unnatural as to ask what a color is, you may as well tell him that it is *incomplete sunlight.*

"Shining down, the great round sun,"

floods everything with his light,—a wonderful mixture of all imaginable colors: the little buttercup receives them all, but some it hides away where we cannot find them, and some it reflects to us. The petals give back to us only the yellow parts of the light, the leaves the green parts; and as Mr. Stimson of the Artist-Artisan Institute says, "Each dear little flower is known by its generosity, not by its selfishness, just as we should be."

Each part of the robe of Iris shows a part of the sunlight, but the whole robe does not show the whole of it. It does show enough, however, to give us *types* of all color, just as the geometric solids give us types of all form. The next step with the children is to test their power to distinguish these type colors. Each child should have an envelope containing Mr. Bradley's first year color tablets, and a piece of gray cardboard, paper or cloth upon which to arrange the tablets. If a neutral gray cannot be obtained, white will do.

Place the "rainy-day spectrum" before the children and ask them to imitate it as closely as possible with six tablets. Use no color names yet. If they make mistakes do not tell them the right order; urge them to look at the spectrum again and again and to try once more. Probably nearly or quite all will place the tablets in the right order without much hesitancy, but perhaps one or two will not.

You may discover a color-blind pupil. About one boy in twenty-five and one girl in a thousand has defective color vision. Such pupils are usually blind to green. I have a friend who tells me that the leaves and flowers of a scarlet geranium under full sunlight differ only in shape! The grass to him is "just the color of a new brick house," and strawberries are *always* red. He eats them only when they are soft! Do not hastily conclude that you have a pupil so afflicted; test him in different ways and many times, using many very light tints of color as well, before abandoning him to his rosy view of the world. But if a boy is color blind he should know it and you and his parents should know it, lest he be unjustly blamed for carelessness, and because he cannot, by and by, engage in such occupations as selling dress goods, painting, dyeing, etc., nor can he be employed by a railroad or steamboat company.

When you are persuaded that pupils have normal color vision, test them to determine their knowledge of color names. Prepare a sheet of paper and make a record like that indicated by this diagram.

Fig. 2.

Test of Knowledge of Color Names.

School.....

Teacher..... Date.....

Name of Pupil.	*Red.*	*Or.*	*Yel.*	*Gr.*	*Bl.*	*Vio.*
Abbot, John	×		×	×	×	
Andrews, Kate	×	×	×	×	×	
Bates, Dorothy	×	×	×	×	×	×
Curtis, Geo.	×		×		×	
Etc., etc.						

Such a record is valuable only when each pupil is tested by himself,—not in the presence of others. You will find for example that John Abbot knows red, yellow, green and blue, but has no name for orange and violet. Or that Geo. Curtis calls orange "a kind of red" and violet "a kind of blue." The children as a whole will have three or possibly four color names which they use as *class* words; the next step is to make these more definite and to increase their number to the six Froebel began with in the kindergarten. This may be best done perhaps by taking one group at a time and in the proper order beginning with red.

You will have your own way of teaching any single color; but the following seem to be necessary stages:—1. Having

placed several red objects in different parts of the room, and distributed the color envelopes, hold the red paper before the children and ask them to select a tablet to match it. 2. Ask them to find objects in the room having the same color. 3. Ask some pupil who knows to give the name *red.* (Your previous test will enable you to select the right pupil.) 4. Call for the use of the name; *a*, in describing objects in sight, *b*, in describing objects from memory, 5. Write the name upon the blackboard and have the pupils, if old enough, use it in written sentences.

You have heard of teachers who have "blue days;" did you ever hear of those who have "blue weeks" and "red fortnights"? During a "red fortnight" a red sheet of paper hangs upon the wall before the children. They wear red neckties and ribbons, and carry handkerchiefs with red figures or borders. Upon a large sheet of manilla paper is diagram like this, (Fig. 8), which the children fill out with great delight.

Fig. 3.

Name of Color.	*Minerals and Metals.*	PLANTS.			*Insects, Birds, Etc.*	*Other Objects.*
		Leaves.	*Flowers*	*Fruits*		
Red.	Ruby. Garnet.	Colias.	Geranium Cardinal flower. Rose.	Strawberry. Cherry. Cranberry. Rose-hip.	Spider. Tanager.	Sun towards night and through smoke.
Orange. Etc.	Etc.		Etc.			

This work is related to the Nature Studies, and the chart is utilized in language. The children collect red objects, and the teacher reads some charming little poem like Joel Stacy's "Sweet Red Rose."

"Good-morrow, little rose-bush,
Now prythee tell me true,
To be as sweet as a sweet red rose,
What must a body do?"

"To be as sweet as a sweet, red rose,
A little girl like you
Just grows and grows and grows — and grows,
And that's what she must do."

Orange fortnights, yellow fortnights and others follow until the children know the six and their names. The knowledge of the names may be tested by many pretty devices. Here is a sample: Place upon the blackboard the letters which stand for the colors, in some unusual order,— R. Y. B. O. G. V., or O. B. Y. V. G. R., or G. R. Y. O. B. V., and have the children arrange the tablets in the same order, one inch apart in rows upon this gray ground.

In the *Kindergarten News* for April 1894, you will find "A Color Story" by Miss M. R. Dooling. Your children would enjoy that some Friday afternoon.

A Modern Creation.

Character grows slowly because it is to endure forever. When Nature works for the eternities she works slowly. In educati n and character culture the evil of American life is haste. Suppose the world had not been cre ted and the task were given to a Hoosier or a Buckeye. There would be no record like this: "And the evening and the morning were the fifth day," for then there would be no *days* of creation — not even a *day* of creation. The account would read something like this: —

5 oclock A. M. Creation begun.
5:15. Earth enveloped in steam.
5:30. Earth emerges from the waters. Outlines of Canada, Norway and Sweden clearly seen.
6:00. Coal beds placed and natural gas wells formed.
6:15. Man created.
6:30. Adam comes to breakfast after naming all the animals. Eve meets him at the front door.

Cleveland, O. — *Supt. L. H. Jones.*

Worth While.

'Tis easy enough to be pleasant,
When life flows along like a song,
But the man worth while is the one who will smile
When everything goes dead wrong;
For the test of the heart is trouble.
And it always comes with the years.
And the smile that is worth the praises of earth,
Is the smile that shines through tears.

How Animals Live. I.

By A. C. Boyden, State Normal School, Bridgewater, Mass,

THE *aim* of these lessons is to lead the children to an appreciative interest in animal life, by training them to observe habits and distinguishing marks, by leading them to think of the adaptation of the parts to the life, and of the need of kindness to the animals. Such exercises furnish excellent material for drawing and language also some application of the number work.

First Year. (Sept.—Oct.)

The observation of living animals as far as possible in their natural environment. *Grasshoppers* and *crickets* may be kept in fruit jars with small tufts of grass on which they may crawl. Watch the movements such as crawling on the ground, jumping, and clinging to the grass stems. Count the pairs of legs; for what is each pair used? Find the number of joints in the legs, and the little claws at the end; what do they help it do? How many pairs of wings? How does it hold the outside pair? Think how these protect the inner pair, and how the position helps its movement through the grass stems. Find the inner wings folded like a fan, how are these used? Watch it eat; what is its position? What does it eat, and how? Where are its eyes? How many large ones has it? Why does it need such eyes? How many feelers has it? Where are they? Watch it use them. Listen for the sounds it makes; see if you can tell what it uses in making them; what do you think they mean? Watch it breathe, which parts move? Where are the little breathing holes? [Use the names head, thorax, and abdomen in talking about the insect.] How does the color help protect it? Where does it go in the night and on rainy days? Find small grasshoppers with short wings, think how they grow to be large insects.

A small glass case similar to a fernery with grass sods planted in it will serve as an excellent home for a great variety of insects. Watch them burrow in the ground, how do they do it? Running beetles, bugs, dragon flies, wasps, flies, moths, etc., can be kept, their habits and parts observed in the same manner as grasshoppers.

Wooden boxes with glass covers and large air holes on the side covered with fine netting will serve as houses for *caterpillars;* keep them supplied with fresh leaves, watch them move, eat, and finally spin the cocoon. Keep the cocoons till spring in a cool, moist place. Encourage the children to look for cocoons under fence rails, under stones, on trees, etc. Observe the parts of the caterpillar, *e. g.* colors, hairs, rings of the body; sharp jaws; number and kind of front legs, prop legs behind; breathing holes on the rings.

In such a box *spiders* may be watched as they spin their web and move along it. How many legs? Which are the longest? Which are next? Why doesn't it have wings? Look for the bright little eyes on the head, how many can you find? (Sketch them.) Does it have any feelers? How can it tell about its food? How does it protect itself from other animals? Look for little balls that hold the eggs, what do the spiders do with them? Watch for the little spiders and see if the mother takes care of them?

An *ant's* nest may be prepared in a glass jar covered with netting, the habits watched and the distinguishing parts noticed. A *toad* in a jar of soil, fed with insects or earthworms will furnish abundant observation, *e. g.* the protective warty skin; the legs for jumping and burrowing; the large

eyes and ears, the wide mouth and peculiar tongue; the three places where the breathing movements are seen (swallowing the air.)

The indoor lessons should stimulate to out-of-door observation on the habits of animals, and reports on these may be used in the morning talks. The children can collect live insects for the case, skins shed by grasshoppers and spiders, oak apples, insect swellings on trees and shrubs, cocoons, etc.

The spirit of kindness should be aroused by the appreciation of the wonderful adaption of parts and habits and the means of protection from enemies.

Expression. The children may be taught in groups so all can observe and express themselves orally. These oral sentences should be used in the early steps in reading and writing. The teacher may read selections from such books as Mrs Gatty's "Parables from Nature," and Mrs. Kelly's "Leaves from Nature's Story-Book."

The children should be encouraged to sketch the animals, *e. g.* the spider with its four pairs of legs, and large helping jaws; the ant with its three pairs of legs, and single pair of small feelers. The teacher may have sketches on the board of grasshoppers on spears of grass, spiders in their webs, ants in their nest, etc. In the memory gems selections may be used which refer to insects like the chirping cricket and busy bee.

Second and Third Year. (Sept.—Oct.)

The more particular observation of the parts of animals by a simple laboratory plan. *Grasshoppers* and *crickets* may be prepared by the teacher by placing them in a mixture of $\frac{1}{3}$ glycerine and $\frac{2}{3}$ alcohol; this renders the specimens flexible for use. Each child, or a row of children, can be provided with individual specimens for study; living specimens as in the first year should be provided for observation of movements as needed from time to time.

In the beginning of the lessons in the second year the teacher may direct the observation by a few oral questions, noting on the board the new words used, then the children may write sentences with these words. As soon as possible they should be trained to the following plan suggested for the third year. Place on the board a series of simple questions on the animal. After they have read aloud the questions to see that the meaning is understood let them make the written record of their observations, the teacher writing new words on the board as they are called for. Encourage a wide range of sentences.

The following questions may be suggestive:—Where does the grasshopper live? What color is it? What kind of a covering has the body? What parts can you find in the head? Tell two things about the eyes. Where are the feelers? How many pairs of wings has it? What is the difference between the front and hind pairs? How many pairs of legs has it! For what does he use each? How many joints has each leg? How many wings has the abdomen? How many breathing holes can you find on each wing?

In another exercise with specimens still in hand, the teacher may lead them to think of the adaptations, *e. g.* the shape and covering adapt to life in the grass, the color serving as protection; the parts of the head are mainly for getting food and seeing danger; the thorax parts for moving; the abdomen has the breathing and egg depositing parts. Bring in small grasshoppers with undeveloped wings and tell of the shedding of the skin as they grow. This may be followed by a drawing lesson on the insest, or some part of it, direct them in placing and outlining as in the other drawing lessons. Words that need to be corrected should be rewritten in sentences till fixed, instead of rewriting papers, it seems wiser to write new ones using the special words that need correction, thus increasing their observations.

Similar exercises may be arranged for crickets, ants, spiders, and beetles. Collect caterpillars and cocoons as in the first year. Morse's "First Book in Zoology," and Packard's "Entomology for Beginner's," are especially helpful for teachers.

Illustrations of Children's Papers

written from the observation of live insects in glass tumblers on glass or bits of apples. New words written on the board as called for, written in answer questions, first draft.

Second Year. 1. "The locust is brown. The locust is that color so the chickens cannot catch him. The locust's wings are big. The locust's wings are open like a fan. The locust eats with his jaws."

2. "The ant lives in the ground. The ant will bite you if you step on his house. The ant will build his house anywhere he can find."

3. The ant has three parts to the body. The ant has six legs. The legs are joined to the thorax. The ant's eyes are on his head. The ant's feelers have a little joint in them."

4. "The spider's body is divided into two parts. The spider has eight legs. The spider uses his front legs to reach across his web. The front legs are the longest. The spider holds on to a fly with his jaws. The spider has eight eyes. The spider's house is strong."

Third Year. (Written in answer to questions.)

1. "The ant is much smaller than the cricket. The ant is deer color on his head and on his thorax, and black on his abdomen. There are three parts to the ant's body. The head is something like a spheroid. The ant's head is smaller than any other part. The thorax is red and is narrow."

2. "The ant is smaller than many other insects. My ant is reddish-brown. The ant has three parts to his body. The head is like a spheroid. The ant's head is smaller than the abdomen. The thorax is long like a cylinder. The ant has six legs. The legs are joined to the thorax."

(Additional papers written after the class discussion.)

3. "I was in the cellar this noon and I saw some ants. The ant has antennae. The ant's nest is made of sand. In the inside of the nest are the little babies. The little babies are in cocoons. The ants milk some little cows and the ants suck the juice from the cows."

4. "I was with my father one summer afternoon and we came upon an ant's nest in the woods. The ant is black and brown and it has three parts to its body. They are the head, the thorax and the abdomen. The thorax is smaller than the head and abdomen. The nest is covered with gravel. He goes in little holes which lead to the chambers in the nest. The nest is a little round hill. The eggs are very small and the cocoons are white. The cows are green."

Legend of the Gentian.

"The Closed Gentian never opens. The fringed Gentian closes in the afternoon. There is a little story that accounts for the difference in these Gentians.

Once the Queen of the Fairies was out late at night. The midnight hour had passed, and the silver moon, the fairy lamp, had swung down and out of sight. Hurrying to a Gentian, the fairy asked for shelter. "Who are you, that you disturb me at this hour o' night?" called the sleepy Gentian.

"I am the Queen of the Fairies," cried the belated little lady.

"Very well, then, if you are the Queen of the Fairies you can find places enough to sleep. Go away and let me sleep."

Poor little Fairy Queen! She was afraid out in the big, dark world.

"I will try again," said she. And so going up to another Gentian not far away, she timidly said, "Can you give shelter to a tired wayfarer, good flower?"

Out peeped the Gentian. "Poor little lady," said the flower. "Whoever you are, you are too little to be out in the dark. Come in and let me cover you over till the sun comes."

Then the little tired fairy slept soundly until morning began to dawn. Then, as she hastened away in the dim light, she said, turning to the flower that had protected her, 'You, kind friend, you and all your children shall hereafter be distinguished from all other Gentians by the power which I now give you to open and receive the warm sunlight when first he peeps upon the world.'"

Primary Geography. I.

By ZONIA BABER, Cook Co., Normal School, Englewood, Ill.

(The first article of Miss Baber's series upon this subject, was not received in season for the September number. Two installments — September and October — are therefore given at one time, that teachers may easily "catch up" with the plan of work which will be outlined from month to month.—ED.)

THERE are few intelligent teachers or parents in our broad land who are not, either consciously or unconsciously demanding something better in geography; a more scientific method of presentation. All are beginning to realize that a concept, however adequate, of a partially colored map is neither consoling nor inspiring to the growing intellect.

We mournfully admit that we were fed on geographical husks while the ripe, life-giving grain was spread like a feast all around us. And can we now dare to cram these same indigestable husks down the throats of innocent souls intrusted to us? There is no subject in the common school instruction on which the same amount of time is spent with such disproportionate results.

The reason we believe to be traceable to the fact that the subject has been presented as a collection of unrelated facts to be remembered and which therefore are easily forgotten. Too often the fact even is not memorized but the words only. The recitation in which the child with much confidence said that, "A hill is a small elevation of water," is a type of many geographical lessons.

The memorizing of words, maps or even unrelated facts, make the subject seem stupid and unimportant. If every teacher in the country could be induced to give the syntax of the four adverbs, *Why*, *What*, *How* and *When* in relation to each subject and each lesson she teaches, there would be few pedagogical errors.

Why do we teach geography?

"Because it appears as a subject in the course of study."

What should we teach in geography?

"That which is designated in the course of study or appears in the text book."

How do we teach geography?

"Just as we were taught years ago."

When do we begin the study of geography?

"In the grade prescribed by 'The Board'"

If however we consider the question thoughtfully and conscientiously, the answers assume a different character. Mental discipline, knowledge, and ethical culture must be our motive in all teaching.

All judgments, reason, imagination — all thinking is absolutely dependent upon sense percepts; hence — all elementary geography must be a study of forms and forces within the child's environment. The child who has never seen a valley, river, hill, bay can have little idea of those surface forms; and since hills and valleys cannot be brought into the schoolroom, the schoolroom must go to the valley.

Field work is indispensable in the study of foreign geography. We might as well try to build an eight-storied building in the air without a foundation as to teach geography without a proper foundation of field work.

A teacher cannot teach one grade alone; in the one grade she must include all others. She either puts mental barriers in the way of the pupil's future progress, or plants seeds which will grow and blossom, the fragrance of whose flowers will perfume his after life. Hence a teacher to do her best work must know the work that precedes as well as that which follows her own.

In the little river basin in the neighborhood is afterwards seen the great continental drainage systems; that little brook has the same habits, the same likes and dislikes, the same caprices as the great river. It is never satisfied with its home but changes it at every moment, tearing out one side, dropping the material on the other; gnawing the bed here, building there; sometimes by a wild caprice deserting its old friends and making its home in a strange land. Its one life principle is constant change.

In the little gully in the bank, the result of the recent rain storm, is seen the Grand Canon of the Colorado.

The little ripple of sand made by the wind on the seashore, is a great sand dune of the Sahara, when magnified.

In the little whirlwind which chooses the dusty street for its path on a summer's day is seen the tornado or typhoon.

The puddle by the roadside, is a lake in miniature. In the bursting of a glass filled with water, on a cold winter's night is seen the work of the great 'Frost Giant' in breaking up the huge mountains. The laughter of the pebbles in the brook is but the first note of the long, deep moan of the ocean.

It is by the constant observation of the changing forms and forces acting within the child's environment that good mental habits are formed and truthful data is gathered; from which reliable inferences can be made. Spasmodic observations result in careless habits and imperfect data.

We sometimes hear teachers say that, "So much time must be given to reading, writing, spelling etc., in the primary grades, that no time is left for observation work."

If nature study is made the basis of reading, writing, drawing, arithmetic, etc., then reading and writing instead of being a mere calling of words or copying of symbols, as it is too often the case, becomes an educative thought exercise.

The line of observation work, practical to any school, must depend upon the teacher and her surroundings. A course of study adapted to our environment might be wholly impracticable to teachers in Florida or California.

I give below our course for the first and second grades merely as a suggestion along the line of nature work.

September.

	First Grade.	Second Grade.
Elementary Geography.	Formation of soil; loam, clay, gravel. Visit lake, brook, swamp, observes soil making at each place. Daily observation of weather. Daily observation of sun.	Field work—lake shore. Formation of beach. Wearing of the beach. Sand making. Wind; action on shore. Examine pebbles found at lake as to material. Observation of moon and stars. Daily weather observation.
Form. Model in Clay or Sand.	Water worn pebbles. Pebbles not water worn. Sphere and its modification. Cube.	SAND DUNES. Capes — Coast showing curves.
Color. Paint.	Pebbles showing various colors.	Pebbles showing various colors.
Appearance of Form. Drawing.	Places visited; as lake shore, brook, etc. Illustrate by stories.	Lake shore at different points, showing wearing and building. Illustrate by stories. Moon's phases.
Arithmetic.	LINES. Comparative depth of different soils. WEIGHT. Weight of bulk of loam, sand, clay, gravel. Compare.	SINGLE THINGS. Comparative number of smooth pebbles, angular, rounded, flat.
Literature.	Story of Sisyphus.	Wind myths.

Primary Geography. II.

By ZONIA BAKER, Cook Co. Normal School, Englewood, Ill.

For October.

"ALL the forms of thought-manifestation under each and every mode of expression may be adequately and most economically acquired under the immediate impulse of intrinsic thought, which means in turn, that every act of expression shall have its full reflex action upon educative thought."— *Col. F. W. Parker.*

I shall describe a line of work in the study of soils showing that number, literature and the forms of expression, reading, writing, modelling, drawing and painting are essential means in the study of the subject.

Motive.—Through the study of soils in the child's environment, and its relation to plants and animals as affected by heat frost and water, to awaken a growing interest is soil-making, its distribution and use.

Means employed.—Field work, manual training, literature, number, reading, writing, modelling, drawing and painting.

Step I.

Visit lake shore.

Special point.—To observe soil-making; wearing and building coast.

Material.—Take baskets or boxes for collecting pebbles, sand and shells. Bottles for lake water.

Method.—Have children observe material brought in by waves. Listen to the grinding of pebbles as waves move up and down the beach.

Notice and make drawing of coast curves.

Collect pebbles, sand and lake water for future study.

Step II

Work in the school room following field lesson.

Children model in sand and picture on blackboard what they saw at lake shore.

Give data collected, in oral and written expression.

Examine pebble and sand brought home. Use microscope and burning test. Plant some grain in the sand.

Observe sediment found in the bottles of water. Compare with sand.

Model in clay angular and spherical pebbles. (*Note:*—This will lead to the question of the causes of difference in form.)

Paint stones composed of same material showing great difference in color.

Step III.

Story of Sisyphus. See "Nature Myths and Stories."—Flora J. Cooke.

Little White Cloud was the Sea's daughter. The *Sea* loved White Cloud, and wanted to keep her with him all the time. But one day the Sea went to *sleep*. White Cloud thought that she would go out to walk alone.

Soon the *Sun* saw her and said: "Come Little White Cloud, and I will give you a ride upon my bright *rays*." So White Cloud ran away with the sun. Soon the old Sea woke up.

He called his little *daughter* but she did not answer. Then the sea was frightened. He rushed high up on the *shore*, and moaned out loud, and ran into the *caves*, but Little White Cloud could not be found.

Then all the water was white with the crests of the weeping sea-nymphs. For every one loved Little White Cloud. At last the Sea found the *Giant Sisyphus* sitting on the shore and told him of his trouble.

"Well," said the Giant, "I know all about it, and if you will put a *spring* up on the *mountain*, where all the tired, thirsty people may drink, I'll tell you where White Cloud is."

The Sea said, "I cannot put a spring upon the mountain, but if you will follow my son, the *River*, he will take you to the spring where he was born." Then the Giant told the Sea that the Sun ran away with White Cloud.

When the Sun heard the Giant telling the Sea he was very angry.

He put the Giant into the Sea to punish him.

But the Giant only laughed. Then the Sun said, "I am your king, and I must teach you not to laugh at gentleness."

"You shall forever use your strength to push these *stones* upon the shore, and they shall forever roll back upon you." Have you ever seen this Giant working, children? What is he making?

As the teacher tells this story she illustrates parts of it on the blackboard and writes important words such as those printed in heavy type. These words are perhaps not used again orally, the teacher pointing to the written words or writing them every time the thought demands their use.

When there is a natural demand for the story the children picture it upon the blackboard or tell it orally or in writing. But never for the sake of the form of expression.

Step IV.

Visit swamp.—Notice plant growth. Collect specimens of soil and peat. Bottles of water. Show in drawing location of swamp.

Step V.

School room work.

Examine soil through microscope.

Burning test.

Note.—Collect clay, treat in same manner.

Compare swamp soil, clay and sand.

Notice percolation of amount of water through each in a given time; relative power of retaining moisture. Plant same kind of seed in each kind of soil, treat in identical manner, notice results.

Step VI.

Lesson on soil found in school garden.

Special point:—Physical constitutents of soil.

By sifting, find out the amount of gravel, lumpy loam and roots.

By washing, the amount of sand, is determined, also notice deposition in waste water of loam and clay. Further tested by burning.

After each experiment children tell, in writing, the results of their observation, which they read aloud.

I give a number paper picked up in first grade room:—

We had 8 cubic inches of soil from the garden.
We sifted it.
We found 1 cubic inch of lumpy loam and roots.
Then we had 7 cubic inches of soil left.
We washed it.
We got 1 cubic inch of sand.

GERTRUDE COON.

The teacher sends a description of experiments to the school printing press.

The printed slips are read the next day in class.

The following one was used in connection with the above experiment.

Work on the Soil.

Emma Lou made a box which held eight wooden inch cubes. She made a box which held one wooden inch cube. We each made a large box and a small box like hers. Emma Lou filled her large box with garden soil.

How much garden soil had she?

We sifted her garden soil through a coarse sieve. We found one half of a cubic inch of gravel. We found two cubic inches of loam in lumps. Then we sifted the soil through a fine sieve. We found one cubic inch of coarse sand. We found that there were four and one-half cubic inches of soil left. We washed this soil. We washed it seven times.

At first the water was very black. At last the water was clear. Then we found two cubic inches of clear sand in the cup.

Book of references for teachers in connection with soil study.

Text Book of Geology. Geikie.
Hand book of Physical Geology. Jukes Browne.
Town Geology. Kingsley.
Economic Geolog . Dr. Page.
Geological Excursion. Winchell.
Soils. Shaler. 12th Annual Geological Survey.

Outline of Study in Preparatory Geography for October.

	First Grade.	Second Grade.
Geography	FIELD OBSERVATION. Distribution of seeds by wind, rain, running water, animals and man. Daily observation of weather; sun; change in length of shadows.	FIELD WORK. Visit Stony Island. Observe lime-stone found there; fossils. Notice granite bowlders; weathering residual soil. Relation of distribution of soils to animals, wind, water, man in the district. Daily weather observations.
Form. Model in Clay.	Characteristic seeds which can be distributed by wind animals and water. Sphere and its modification; cylinder; prism.	
Color. Paint	Fruits which by their color attract animals to aid in distribution.	
Appearance of Form. Drawing	Localities where seed distribution is observed.	Quarry at Stony Island. Localities where seed distribution is observed.
Arithmetic.	SINGLE THINGS. Relation of number of seeds to fruits. LINES. Distance seeds are carried from parent. WEIGHT. Relation of weight of seeds distributed by wind, water, animals.	
Making.	Seed envelope. Seed tray.	
Music.	Dainty Milk-weed babies. "Songs for Little Children." (Elinor Smith.) There was a Pretty Dandelion. "Songs for Little Children." (Elinor Smith.)	
Literature.	The Tree. (Bjornsen.)	The Story of the Amber Beads. (J. Andrews.)

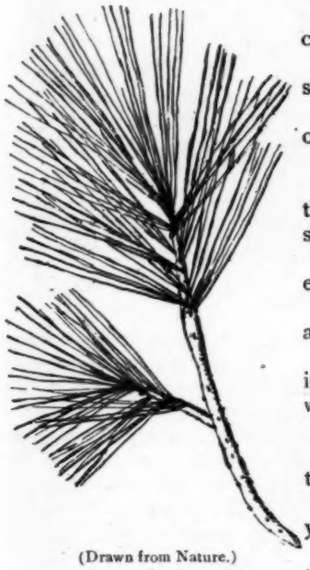
Duluth.

(Normal Training School.)

The White Pine.

ELLA PETERSON. B. Third Grade.

"If mother nature patches the leaves of trees and vines,
I 'am sure she does her darning with the needle of the pine,
They are so long, slender, and somewhere in full view.
She has her thread of cobweb and thimble of dew."



(Drawn from Nature.)

The white pine is tall and cone shape.

The trunk is excurrent and straight.

The branches are whorlled on the trunk.

The branches droop over.

The leaves are simple about three inches long and needle-shape and have three sides.

The leaves are in bundles each bundle holds five leaves.

There was a boy who found a bundle with Six leaves.

The fruit of the white pine is a large cone it is made of woody scales.

Each scale holds two seeds.

The bark is smooth and thick.

The wood is soft and light yellow.

The wood is full of tupentine.

The wood is very valuable. It is used for building house finshings, shingles, and for fire-wood.

The pine trees grow in large forest.

The legend said that once the white pine used to grow on an island. It was very happy with the large ocean around it. One day the wind was blowing and carried these small seeds to a foreign country. In this foreign country there singing changed into sighing.

The Lumbering Industry.

Around Duluth are many pine forest. Hundreds of men are employed in cutting down trees. And hundreds of more are employed in manufacturing these logs into timber.

The snow is very useful to the men. If it was not for the snow the men could not haul the logs to the stream. In some places they could but it would not be so handy. And in some places — they could not at all. In spring time some tugs will be sent out and take these logs to the saw mill to be made into lumber.

And hundreds of men are employed in shipping these logs to other places where they have no logs.

B. Third Grade.

Indian Corn.

Indian corn grows in all parts of the United States. Indian corn is sometimes called maize. Corn grows from seven to ten feet hight. The stalk is jointed and has long leaves placed alternately. At the top is a bunch of flower called a tassel. On the stalk are usually three ears. The ears of corn have a cob covered closely with rows of seeds. There is a silk that comes from each seeds. Indian corn is sometimes yellow and sometimes red. Corn is planted in hills in the spring. It must be kept from weeds while growing. It is ripe in October. When ground it is called meal and is used to make puddings and cake. Starch is made from corn.

ELIZABETH RICKFORD, 8 yrs.

The Flitting of the Birds.

By Georgia A. Hodskins, Springfield, Mass.

The Kingfisher's View of the Matter.

"IT is no use, my dear. I've put up with it all summer! I'll not endure it any longer. I've spent hours and hours catching fish and frogs and feeding those youngsters and now it is the last of August and they are just as helpless as ever. They expect to be coddled and petted always. Think I am going to tie myself down to play nurse for them all this summer trip. I'm not at all! They're old enough, and smart enough too, for that matter, to look out for themselves and the sooner they begin the better!" and off flew Father Kingfisher in a fine rage.

Kingfisher.

Did Mother Kingfisher resent this? Oh no! She quite approved and next day she and her husband flew off to the south, leaving the young birds to look out for themselves on their trip. I've even heard that she and her mate were a little tired of each other and chose different routes for their journey.

Did you ask about the young birds? Oh, they didn't mind it. That is the way of the kingfishers. They all like to take a vacation alone. But I wonder how the young birds knew which way to fly, don't you? Do you suppose the old birds left them directions?

The Whip-poor-will.

"Fare you well! Fare you well!" Whose mournful strain is this we hear from the woods these early September evenings?

'Tis the Whip-poor-will singing his good-by to us from the distance. He is not so tame as last May when he perched on the roof of the well-house, right by the kitchen door and sang to us evening after evening.

The females and young birds have already gone south and the old males will linger behind them only a few days.

"Whip-poor-will! Whip-poor-will!" Fare you well, dear birds. Come again next May when flies, gnats and other small insects are plenty. Fare you well!

The Flicker.

"Ha, ha, ha!" laughs the Flicker. "How the small birds are all hurrying off, for fear of the North Wind! Now I'm independent. If insects are scarce I can live on berries or seeds that I find in the woods. Then, too, we woodpeckers know where many fine, fat grubs have hidden away.

I like the brisk winds. They suit me exactly. I'm not afraid of the cold. I shall wait till November. Then if the winter bids fair to be a severe one, I'll go farther south, if not, I may decide to remain here. I can be comfortable either way!" and the Flicker laughed again, "Ha, ha, ha!" as the swallows flew by him.

The Flicker.

Thistle Bird.

The glorious August days are past. Signs of fall are all about us. Day by day the gorgeous colors of the summer are replaced by the deeper ones of fall. The color now is in the leaves rather than in the blossoms.

The bachelor buttons have scattered their seeds. The dry pods of the milkweed have opened and the flat, brown seeds have seized the first opportunity, in the shape of a breeze, and sailed away on their thread-like wings in search of a new home.

We see none of the glowing violet-red flowers of the thistle. Only dry, prickly stalks and heads filled with seeds ready to fly at a moment's notice, have taken their places.

The pasture is still. We hear none of the insects that a few weeks ago filled the air with their chirping. Now and then you catch the shrill note of some cricket that has not succumbed to the frosts.

See that flock of dear little birds. They are soberly dressed, yet they seem very gay and happy. Look! They are eating the seeds of the thistles. That is why they are called thistle birds, though they have a longer name, for the books call them American goldfinches.

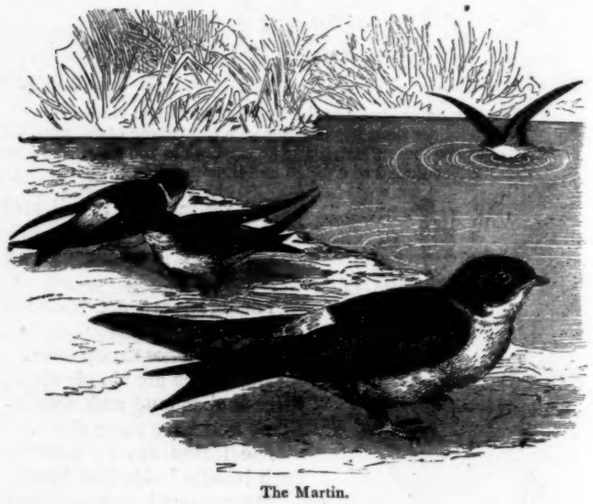
You thought the thistle bird was a jolly little fellow, dressed in bright yellow with trimmings of black? So he is! In the summer he dresses very gaily and he and his mate are so happy, rearing their young brood. But when the little ones are grown and the fall days are come, he leaves off his gay clothes and wears a plain suit, as you see him, brownish-olive above, and a dirty white, slightly tinged with yellow in some parts, underneath.

Now, too, they flit about in flocks, instead of living in pairs as they did through the summer.

If the winter is very mild and the snows so light that the weeds with their "storehouse of food" for the birds are uncovered, little thistle birds may be seen through most of the winter; but if the winter is a cold one and the seeds covered up by the snow, the birdies must go south to look for their favorite food.

The Martin Family.

"Twitter, twitter, twitteree, twitteree!" Great is the commotion in the Martin family in the box in the orchard.



The Martin.

"My dear," chirps Mr. Martin to his wife, "It is really time we were up and moving. Do you know it is August already? This house has been very pleasant and airy this summer, but it is hardly suitable for a winter residence.

This morning, as I took my usual early flight, I was reminded that the annual reunion of the members of the Martin family was at hand. From far and near they are gathering.—Ah, here comes Neighbor Blueblack. He will tell us the news. Good morning, friend! What are the plans?"

"The latest dispatches state that we must be off the day after to-morrow. The day was set by the council. We start at daybreak. I must fly on to spread the news, that all may be ready," and off he flew in great haste.

"Well dearie," continued Bill Martin, "we must make all our plans at once so as to be ready when the signal is given. The Martins have always set the other birds a good example of promptness. We must not fail them this year."

The Red-wing.

"Quonk-a-reee, quonk-a-ree!" 'Tis the Red-wing's carnival time now. All summer he and his companions

have been busy. His mate has reared two broods and that has meant that hundreds of worms and grubs must be dug each day to feed those hungry youngsters.

Now the clear, cool October days have come. The youngsters are old enough to look out for themselves and from far and from near the red-winged blackbirds have gathered until it is not unusual to see flocks of more than a hundred flitting about near the swamp, their bright scarlet shoulders flashing in the sunlight like the epaulettes of a company of soldiers. How jolly they seem! And their note, if not quite as musical as that of the bobolink, yet has a liquid sound that harmonizes well with the scene and the favorite swampy haunts of the flock. "Quonk-a-ree, quonk-a-ree!" Don't you like to hear them calling from the alders by the brookside?

Soon the red-winged blackbirds will leave us and after November is here we shall see them no more until another spring calls them back.

Barn Swallo .

Here is the barn swallow. It goes in September. The swallows all go early. I'll not tell you why. You may find out and tell me. Have you ever heard of the barn swallow's nest, or better yet seen one? They are not very common now. They do not like our tightly built barns as well as your grandfather's old-fashioned, roomy ones, with the great rafter's which were just the right place for a nest.

The nest is made of the same material as the robin's, only Mother Swallow adds a soft lining of feathers to make it more cosy. Often they build a little platform just outside the nest, but touching it. Here the male bird can rest while the female is sitting and later, when the little birds are grown and the nest is too full, both the old birds will roost here at night.

In olden times many people who had not used their eyes very sharply, I think, believed that the swallows, instead of going south like the other birds, buried themselves under the water, rolling themselves up in a covering of mud and there slept till warm weather.

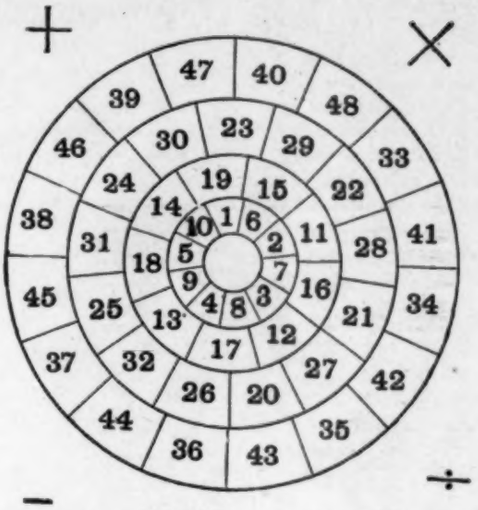
The Meadow Lark.

Step softly. Keep in the shelter of the trees. Follow closely. We will go to the South Pasture. There you shall see the meadow lark, one of our sweetest birds. You have heard his clear whistle. Have you ever seen the musician? There he is perched on that fence post just beyond that old apple tree. See his beautiful plumage. Look out for that twig. Ah, he heard it! There go the flock. Notice their peculiar flight. You see he was the sentinel. He heard you and has warned the others of danger.

After the baby larks are grown, the birds gather in flocks of ten or a dozen. They feed in the meadows. The poor birds have learned of their danger from hunters, so they past one member on guard while the rest are feeding. Are they not wise little birds?

Well, now 'tis November and this week they will leave us.

Wheel Diagram.*



Draw the circles on the blackboard with colored crayons, using white for figures. For a class exercise, place any digit in the center, with the sign indicating the operation. The teacher points to any number; the class, working mentally, give results by individual statements. Let all work be done with quiet attention and rapidity.

"We All Feel Polite."

Once upon a time a certain mother noticed a remarkable change in the deportment of her six-year-old son, who from a rough, noisy, discourteous boy, became transformed into one of the gentlest, most courteous, and considerate little fellows in the world. The child was attending a kindergarten, and the mother naturally inferred that to his teacher was due the change she was glad to notice in him.

"Miss Smith teaches you to be polite," she remarked, making what was really an assertion in an interrogative tone.

"No, she never teaches us one bit about it," was the instant and most emphatic reply.

The mother was puzzled, for she was at a loss to account in any other way for so radical a change. A second and third attempt to discover the cause of this condition was attended with a similar result,— energetic denial upon the part of the child of any instruction in the matter of courtesy.

"Well, then, if Miss Smith doesn't say anything, what does she *do?*" she asked at length, quite desperate in her desire for light upon the matter.

"She doesn't do anything. She just walks around, and we all *feel* polite. We feel just as polite as — as *everything!*" and the inquiring mother was fully satisfied.

— *Educational News.*

Our Supplementary Picture.

Hannah Lomond.

We are all familiar with the old Scotch story of Hannah Lomond, who, while at work in the fields, had her little baby stolen from her by an eagle. The children will be greatly interested, as they always are with a story that touches so closely the lives of their own little folks. The cry of "Hannah Lomond's bairn! Hannah Lomond's bairn!" with which, as the peasants saw the eagle carrying the child aloft, they made the welkin ring, will rouse an answering echo in the hearts of the children.

Let the children see, too, from the engraving, how the mother at the risk of her own life, climbed the steep crags, where often there was hardly a foothold; and how, reaching at last the dizzy height, she seized the child and returned triumphant with it to the valley below, where the peasants, terrified and expecting every moment that the brave woman might fall, welcomed her with a cry that rang from mountain-top to mountain-top. In the hands of the imaginative teacher, we are sure this picture will furnish material for wide-awake language lessons for this coming month.

* From "First Steps in Arithmetic," A. A. Lovell & Co.

ANNA GRAY JENKINS.

In Memoriam.

NOW and then a rare spirit appears upon the earth, clothed in mortality, treading the common paths of life beside us, and staying only long enough to show us how to live brightly, purely, ideally. Such an one was Anna Gray Jenkins. In her short life of twenty years she was the guileless, happy child, the thoughtful, tender daughter, the earnest, conscientious student, the loving, faithful companion, and a teacher who entered at once into the holy of holies of her work. Little children turned to her as flowers turn to the sun, and light and warmth never failed them. Prepared for her work by a thorough course in normal training, gifted by nature with rare insight into children's hearts, her brief career as teacher was characterized by that quality of success that will make of her memory an inspiration to all who were connected with her in this work. In the early spring she drooped, but clung to her "darlings" in the school-room, concealing great physical suffering, working silently and bravely on, fearing that a revelation of the truth would compel a separation from them.

While the summer flowers were at their fullest, this lily among women, in the blossom of her womanhood, slipped away from clinging arms and passed to the spirit land. Her life was full of beauty and fragrance, and her loss can be borne by her heart-broken friends only by the help of the Divine Comforter.

Miss Jenkins was a graduate of the Teachers' College (No. 9 University Place), New York City, remaining there four years as student and teacher. Of this period President Hervey says: "She is one of those of whom the college is proud to own as a graduate. As a teacher in a most important and difficult grade in the School of Observation and Practice, she has achieved unqualified success, and has left a standard of excellence which it will not be easy to surpass."

Miss Jenkins next took up her work in the Froebel School and Kindergarten, Troy, N. Y., where her success was only equalled by her devotion to the interests of the school. It was to these children she clung so heroically at the last.

In the establishment of PRIMARY EDUCATION this large-hearted girl was fully interested. Upon the cover page of the first edition is a picture of an ideal school-room, taken from life at the New York College. Here Miss Jenkins is seen writing upon the blackboard these words:

"Ye are better than all the ballads that ever were sung or said,"

and about her are grouped the little children, watching with earnest upturned faces for their reading lesson. But no picture can reproduce the radiant soul of this sunny-haired girl looking through soulful eyes into the hearts of the little ones.

Later she was a valued contributor to the columns of this paper, giving us glimpses of her skilful management and loving intercourse with children.

The Story of the Maple.

BY FANNY A. COMSTOCK.

FAR off in the meadow grew a Maple Tree. There were no other trees near her, but she was not lonely, for the Brook was her friend. The Brook, you must know, was a great traveller, and if he had not always been in a hurry, could have told wonderful stories. As it was, he said enough to set the Tree thinking.

One day the Maple Tree said, "Do you go as far as the end of the world?"

The Brook laughed. "Do you mean the place where the sky reaches down and touches the land? That isn't the edge. I've travelled hundreds of miles, and I've never found the edge. I don't believe there is any."

Whether what the Brook said, had anything to do with it or not, about this time the Maple began to feel very strange and restless.

"Such a great big world, and here I stand in the middle of it, doing nothing at all!"

The poor Tree grew very uneasy, especially in the ends of her branches, as if she were trying to do something and couldn't. One day she could bear it no longer, and gave a great shake and stretch and push all over herself, and then she felt better. For the strong push loosened the little red bud scales that had been fastened so tight. That was just what the Tree wanted, only she didn't know it.

About this time something else happened. One morning the Tree thought she felt more alive than usual, and listened to a queer little gurgling noise that she had not heard all winter. It sounded like a million silver water drops going through a million tiny channels. Only it was very faint and soft, so soft that nobody but a tree could hear it. When she heard it she said to herself very wisely, "I think summer is coming by and by."

After that she used to feel very proud and happy, as if she were working very hard, and felt sure something beautiful would happen.

One morning the Brook went very slowly, all but stopping under the Tree, talking softly all the time.

"I always loved you, but now more than ever. Do you know how beautiful you are? I see you far away and hurry till I reach you, and can hardly bear to leave you. Throw me one lovely red flower!" And the Maple threw a flower down.

Day by day the Brook begged for more flowers. Sometimes the Tree was kind and gave them, but when the Brook said, "Give me all of them," the Tree said, "No, I think I must keep some. I think there is more to do with them;" and would not give them for all the Brook's complaining.

Little crumpled green clusters on the ends of the branches! Larger feathery tufts on the ends of the branches! Strong great leaves on the ends of the branches!

And now the Brook was almost ready to cry that he could not stay as long as he would with the Maple Tree, for he had far to go in the hot sun, and she spread cool shade for him with her hundred hands.

A strong, beautiful tree, to make brooks and birds and butterflies happy! And still the soft water music played through the tiny channels, and still the ends of the branches were busy, busy!

And now half hidden by the leaves hung beautiful fruit keys, where the red flowers had been, and the happy Tree said to herself, "My work is done. Now I may rest."

One night came a troop of Fruit Fairies, and flew about the Tree. "We must pull them off," said they, "for she is too proud of them ever to let them go. She loves them better than her scarlet flowers, better than her leaves. And why shouldn't she, when there is a baby Maple Tree inside every one of them? We will take good care of them."

Very gently they pulled off the fruit keys and laid them on the ground. Some they left near the Tree to bear her company, some they gave to the Brook because he loved the Tree, many they carried far away, and left them wherever they thought a new Maple Tree was needed. In the morning the Tree was lonely, but she kept the tears back and said proudly, "It is better so."

Then she looked at the ends of the busy branches where were next spring's buds already showing. She smiled to herself, and said, "Another spring, more flowers, more leaves, more fruit." Then she was comforted. She tried to remember whether she had anything else to do before winter. She thought there was something else, but she could not think what. So she waited.

And now the year was growing late, and the Brook began to tell her wonderful stories about the harvest time.

"How I wish I could take you with me," he said, "and show you what I have seen!"

"Tell me about it," said the Maple.

"I couldn't tell you half if I tried;—great barns filled with sweet hay, yellow pears and red-cheeked apples hanging on the trees, ripe pumpkins and squashes for next winter's pies, yellow corn, and the harvesting of the grain! It is a wonderful time!"

The Brook hurried on as if he wanted to find the apples and pears once more, and could not even stop to say good-bye.

The soft autumn sunshine filled the air, and the crickets chirped loudly. The meadow was heavy with goldenrod. Suddenly the Tree remembered.

"Why to be sure, a new dress for the harvest festival!"

It was very hard to decide on the color, when yellow and red are both so lovely. So she asked the Brook.

"Red is the prettiest color in the world," the Brook said, "but you might have a little yellow trimming somewhere."

So the dress was red, trimmed with yellow, and very lovely the Maple Tree looked in it. Every day the Brook begged for leaves, and one by one they fluttered down to him.

"Faster, faster!" said the Brook.

"One at a time," said the Maple Tree.

So the lovely Tree stood in her red dress through the frosty mornings and the soft hazy afternoons, and under the great yellow moon of October.

One night it grew dark early, and the rain fell fast.

"I am afraid something is going to happen," said the Brook, sadly.

"Yes," the tree whispered, "I feel it all through me."

And they were right. For the North Wind and all his fairies were already on the way. How they danced and howled around the Maple! How they puffed their small chests and blew all night long at those lovely red leaves, and sent them sailing, sailing miles away!

In the morning the Brook flowed beneath bare branches, and he thought he saw tears on them; but it might have been the rain.

"Don't cry," he whispered, "I like you best of all, now; for now I can see the blue sky through your beautiful twigs, and it is lovely. Please stay so always." And the Tree promised to stay so till next spring.

And so the Maple Tree, like all the rest of Mother Nature's children, bore her fruit, the beautiful keys with the baby Maples inside them. And so she wore her beautiful dress at the October festival. But she could not wear it forever, could she?

Number Problems.

(This work is taken from "Practical Lesson in Fractions" by Florence N. Sloane. D. C. Heath & Co.)

Fourths.

The children having cut their circles into halves, using the dark or strong line for that division, each half should be divided into halves by cutting through the middle line. Have the parts counted, and have the children notice that the circle is now divided into four equal parts. Give name for each part, and write it in words and figures on the blackboard. Also give the word *quarter* as meaning the same thing. Have fourths put together to form a circle and call the children's attention to the fact that it is no longer a whole circle, although equal to one. Have the children tell how they would divide anything into fourths, using the circle for illustration. They have now learned that in one circle there are four fourths. Have the circle divided into halves, and the number of fourths in one and two halves counted. Have the children notice that one circle, two halves, and four fourths are equivalent.

Have fourths taken away from the circle successively, and these facts taught: $1 - \frac{1}{4} = \frac{3}{4}$, $1 - (\frac{2}{4}$ or $\frac{1}{2}) = \frac{1}{2}$, $1 - \frac{3}{4} = \frac{1}{4}$, $1 - \frac{4}{4} = 0$. Have the children find what must be put with $\frac{1}{4}$, $\frac{1}{2}$, and $\frac{3}{4}$ to complete the circle.

Next have them find how many times $\frac{1}{4}$ must be taken to make $\frac{1}{2}$, $\frac{3}{4}$, and $\frac{4}{4}$. Also into how many equal parts $\frac{1}{2}$, $\frac{3}{4}$, and $\frac{4}{4}$ must be divided to get $\frac{1}{4}$. Lines, slips of paper, paper squares, and oblongs should also be divided into fourths by the children.

Until perfectly familiar with the subject the children should use their circles when questions are given.

(From Teacher's Edition.)

Practical Problems.

1. How would you cut an apple into fourths?
2. If Mary divided an apple equally among 4 girls, what part of the apple would each girl have?
3. If John eats $\frac{1}{4}$ of his candy each day, how many days will it last?
4. Carrie has spent $\frac{1}{4}$ of her money. What part of it has she left?
5. Mrs. Brown divided $\frac{3}{4}$ of a pie equally among 3 boys. What part of the pie did she give to each?
6. How could I get $\frac{1}{4}$ of a melon, if I had $\frac{1}{2}$ of one?
7. Jack sold all but $\frac{1}{4}$ of his papers. What part did he sell?
8. Jane's father gave her 1 dollar and told her to keep $\frac{1}{2}$ of it herself, and divide the remainder equally between her two brothers. What part of the dollar should she give to each?
9. Which would you rather have, $\frac{1}{2}$ or $\frac{3}{4}$ of a pie?
10. Arthur wishes to earn a dollar. He earned $\frac{1}{4}$ of a dollar on Monday, and $\frac{1}{2}$ of one on Tuesday. What part has he yet to earn?
11. Mr. Smith sold $\frac{1}{2}$ of his sheep to Mr. Brown, $\frac{1}{4}$ to Mr. Jones, and kept the remainder himself. What part of his sheep did he sell? What part did he keep for himself?
12. Lucy picked a quart of berries. She gave $\frac{1}{2}$ of them to Ella, and $\frac{2}{4}$ to May. What did she have left?
13. Ella saved 1 quarter of a dollar each week for 3 weeks. What part of a dollar did she save? How many more quarters must she save to have a dollar?
14. How many slates at a quarter of a dollar each can Cora buy with 1 dollar?
15. If Fannie had $\frac{1}{2}$ of a peach, into how many equal parts must she cut it to get $\frac{1}{4}$ of a peach? How should she cut $\frac{3}{4}$ of a pear to get $\frac{1}{4}$?

Credit.

The melody and words of the song entitled "Little Eyes" appeared in September PRIMARY EDUCATION without the credit due *The John Church Co.*, (Cin.), to whom the copyright belongs. It was printed originally in one of their series, "Song Birds." We regret that it was used by us without credit under the impression that it was free.

Nature Thoughts.*

By CHARLES B. SCOTT, State Normal School, Oswego, N. Y.

AS teachers we all recognize the importance and necessity of keeping in mind three objects in the nature study: interesting the children; inspiring them with a love for nature; and leading them to investigate and see for themselves and to tell clearly and truthfully what they have learned.

Let me add another object: to lead the pupils to see the higher side of nature and to think the thoughts of nature. There is more to see than the mere facts of sense. Back of these are causes and reasons. Beyond and above these are the great thoughts, the grand lessons which come to the sympathetic, true student of nature.

The little children appreciate and respond to the beautiful. The bright colors of flower and leaf and stone, the rich tints of the autumn foliage and hues of the sunset and clouds, the song of the bird and babbling of the brook all appeal to them.

How well I remember the first words of a little three-year-old, to whose timid request for a "flower" I had responded by giving her some of the first "pussy willows" which I was carrying. She rubbed them so softly against her cheek and her quiet "Isn't dey pitty?" told how they appealed to her.

Lead the children to the beautiful in the most common things about them, in water and sky, in field and forest. Will not the beautiful in their nature be developed? Will not they be thus helped to a better appreciation of the beautiful in art and literature? Will it not make their lives richer and their visions broader, beyond the horizon of sordid desires and needs, mere bread and butter, or dollars and cents?

Nature study should develop the æsthetic sense. To the child whose higher vision has not been dimmed by disuse, whose spiritual sense has not been atrophied by neglect, nature is a guide pointing ever upward. The preparation of nature for winter and the spring awakening, (and so many of Mother Nature's provisions for her children), are wonderful lessons of protection and care and forethought, which appeal to the little children with peculiar force. When a little older they apprciate the lessons of order as shown in plant and animal. They catch glimpses of purpose and plan and gradually — the more gradually and insensibly the better — are lifted up to the Protector and Planner of all.

Nature study should develop the spiritual sense of the child.

Equally apparent to the seeing eye — everywhere are the lessons of mutual dependence and mutual helpfulness. Root, stem, leaf, flower, all help one another and depend on one another. The story of the raindrop in all its journeys is a story of continual helpfulness and yet of continual dependence. The rain and snow and dew and cloud are helping and being helped. The brook is not merely singing, but workiug every moment. Nature is a great mutual cöoperation society each part with its work to do.

Nature study should develop the social and ethical sense.

But these teachings of nature must come to the child from his contact with nature herself, growing as he becomes more familiar with her work and understands better her thoughts. The teacher can but lead her child to nature and leave him in Dame Nature's hands. The teacher who, in this work, simply preaches to her pupils, not merely deprives them of the joy of discovery, but weakens the force of the lessons which Nature herself impresses so deeply on her sympathetic, reverent students.

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Fall Seed Study.

How Mother Nature Takes Care of the Seeds.

Our pupils have learned how and where seeds are formed (See September number.) Now we want them to discover how they are scattered or disseminated and how Mother Nature cares for and protects them during their winter sleep.

Study of the Milkweed.

The milkweed, with its large seed-pod and many seeds and long silky sails, is abundant and easily obtained and studied. No more beautiful or better material for beginning fall seed study can be found.

Begin out of doors. Visit a milkweed patch with the children and have them dig up a whole plant, with root, stem, leaves and pods, and transplant into earth in the schoolroom, where the children can have the whole plant before them. Gather some green and some ripe pods and have a few seeds for use in separating the seeds.

Mamma Milkweed.

Bring out, by questioning as far as possible, not by merely telling.

Name. Why called milkweed? Call it Mamma Milkweed, and in lower grades personify.

Occurrence. Where found? Who found it? Who dug it? Who brought it to school? How many have seen milkweeds growing? Where? In how many places? We are going to find out how they get so much scattered.

Life and Work of the Plant. Review (See September number) the life of the plant, bringing out by questioning and experiment the special work of root, stem, leaves and flowers. The milky liquid is simply nourishing matter, made from the food taken in by the roots and leaves, and stored up for use by the plant.

Why have the flowers faded and dropped off? Their work is done. Soon root and stem and leaves will die; they will have finished their work. All have been working all summer to make these large green things. People call them pods; perhaps we will find a better name for them.

Seed-pods and Seeds. Notice how strongly the pods are fastened. How? Why? Study their covering, its "trimmings," and the line along one side. Have the children feel how soft and yielding the covering is, like a "comfortable."

Have them mould one of the pods (with a piece of the stem) in clay, as carefully and truthfully as they can, or draw it, or outline it with shoe pegs.

Have them study a pod partly open. You and they will find few prettier objects. Isn't that beautiful? Are the little scales, each with a little border around it, scattered about any way, as boys and girls often throw their things, or does each little scale have its place? Why arranged so carefully? Why does not Mamma Milkweed tumble them in any way?

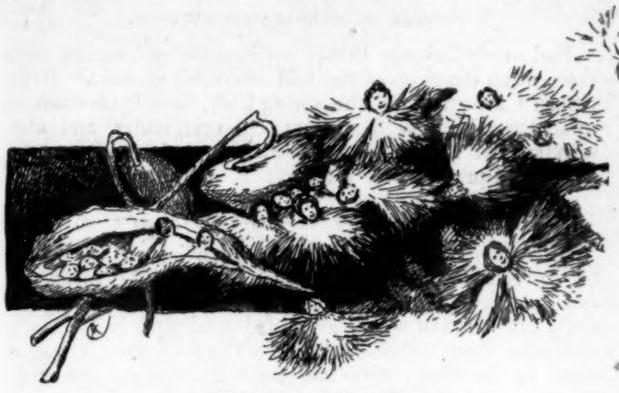
Why is the coat so thick and soft? Does Mamma Milkweed ever take it off? Watch out-of-doors and see? Why does she take it off? Does she just tear it open any way or does she split it carefully along one line? Why?

What is there inside beside the scales? How soft and silky the white threads are.

Who will pick off these scales for me with a pin, very

carefully one by one, and give two or three to each boy and girl? What comes off with each scale — a little piece of silk? What is the silk for? (Examine the ripe pods and notice how the silk spreads out to catch the wind.)

So Mamma Milkweed has been working all summer, with root and stem and leaves and flowers, to make these scales. She has placed every little scale so carefully and given



Flying away from the cradle.

each a beautiful white sail. She has wrapped them all up in such a soft warm blanket and made them open at just the right time, so that they can get out and go sailing away when Mr. Wind calls for them. Why has she done all this?

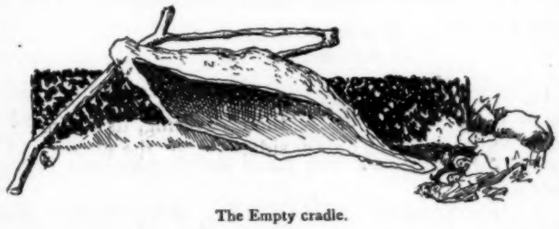
Now we are going to find out the most wonderful secret of all. (Pick out large scales from a green pod, not too ripe, pinch off the "rim" from the broader or free end and press gently between thumb and forefinger. A little green plantlet will come out,— large enough to be easily seen by the children — with a short stem and two leaves lying face to face, so as to appear as one, but readily separated with a pin.)

Tell the pupils, if they have not studied the germination of seeds, how this baby plant will grow to form a large plant next spring.

The pod then, is the cradle, packed full of baby plants, wrapped so warmly and rocked so gently. Each baby has a sail, so that when Mr. Wind comes for them he can carry them over the country.

Additional Seed Study. Study other seeds with similar hairy sails, such as the dandelion and cat-tail. Show the children pictures of the cotton bolls, and tell or read to them the story of the cotton and its use, (See June number of this paper) showing how man uses these seed sails that Mother Nature makes.

Study also the seeds with wings, like the maple, box elder,



The Empty cradle.

linden and dock. Have the children make collections of seeds that stick, like the burdock and sticktight. What makes them stick fast? Why?

If the touch-me-not seed vessels can be obtained they will show another method of scattering seeds, by means of springs or elaters.

Field Lesson. A field lesson for the study of seeds will be very helpful. It need not to be far, to any lot overgrown with weeds. Have the children collect and classify different kinds of seeds — seeds that sail, fly, and stick — and fasten them to cards.

Protection of seeds is a topic almost as fruitful as the dissemination of seeds. Seeds are protected by their seed case, hard outer covering, neutral colors, sharp and unpleasant taste, by the covering of leaves and snow, etc.

Reading on Seeds.

Newell's Reader in Botany, Part 2, pages 112 to 137, will be found helpful for teachers.

"The Little Brown Seed in the Furrow," in "Little Flower Folks," Vol. I., (Educational Publishing Co.,) is very good. Many similar poems can be found.

Intermediate Department.

By CHARLES B. SCOTT.

Observation and Expression.

WE all recognize the principle that the work in nature study must be based on actual individual observation by the pupils (and the teacher) and that what has been learned by observation should be expressed.

You ask at once the practical questions: How shall the pupils observe? How shall they express or tell what they have discovered?

Suggestions for Observations.

Observation, as a basis for expression, is simply continuing in the school-room the methods of nature in out-of-school education. Assume that the children have observed, and when first taking up any new topic, find out by questioning what they have already *seen* (not merely what they have been told or read) and what they *know* (not what they imagine) about the thing to be studied. This will connect their out-of-door life and school life, and encourage them to further observations. It will help the teacher to learn how the pupils look at things. You will often be surprised to see how much they have observed.

Dame Nature, that wise old teacher, does not have formal lessons at set times. Her method is largely one of gradual absorption and assimilation. Follow her example; you will never find a better guide in educational methods. Try to lead up to the formal lessons by encouraging much previous observation out-of-doors and in the school-room.

Gather the material a week or two before any formal lessons and keep in the school-room where the children can observe it. An occasional question, oral or written on the board, will direct their observation and arouse their interest. When thoroughly interested, and with something to tell, then have the formal lesson.

Education in classes has not been adapted from Dame Nature's school. She develops individuals. Aim to have the observations individual. Each pupil should see for himself. Do not let the quick bright members of the class make and tell all the discoveries. Encourage a pride in personal investigation, and discourage the mere appropriating from others. Each pupil should see and think and tell for himself. Of course the material should be in every pupil's hands, or where it can be easily studied by all.

Much depends on the material. Select that which will bring out the points you wish to dwell on. Do not expect the children to see what the average child cannot see with the material given him. Do not emphasize too much little details difficult to see, or dwell on these till the children lose their interest.

Need it be added that no observation lesson will be most successful unless carefully planned by the teacher beforehand?

As to the order of observation, it will be found most interesting, and therefore best, to study first life and habits, function and action, and then structure, leading finally to comparison and classification. In investigating structure, study first the whole and then its parts and then the relation of the parts to the whole and to each other.

Suggestions for Expression.

It must be *ex*pression based on *im*pression. The pupils must tell what they themselves have seen, and should tell simply because they have something to tell and want to tell it.

Here again we can do no better than follow the guidance of Nature. The little children express long before they talk, and all children express much which they cannot

put into language. Little children often express most clearly with clay (moulding) or pencil (drawing) or shoe pegs If they cannot tell in words have them tell in other ways. In all but the lowest grades language expression, oral and written, should be emphasized as the most widely used form of expression. In all grades language is greatly aided and supplemented by drawing, the best means of expressing form and relative position.

The little children will tell best in story form, personifying what they have studied.

While the narrative form should be continued in all grades, description should be emphasized in all but the lowest grades and the children led to make word pictures, clear and truthful. The final test of their power of expression is the ability to convey to others a clear idea, or mental picture, of what is in their minds.

Suggestions for Description.

In description the following principles will be helpful:

1. Describe the whole and then its parts.

2. In describing any part bring out first its relation (position, attachment, etc.,) to what has been previously described. Otherwise it cannot be properly placed in the mental picture.

3. The order of description should be from the base upward, or from the attachment outward, and from the outside inward.

If the observations have been orderly the expression is likely to be orderly. Use outlines sparingly. Do not make them for the children. At first make them with the children. Later each child should make his own outline. This will aid greatly in cultivating individuality and will prevent the stereotyped sameness too common in written work.

October Plant Work.

The work in seed study, suggested in the Primary Department, may be carried on in other grades, with more careful and detailed observation, more thorough descriptions and more attention to structure and comparison.

A fruitful subject for study is the preparation of nature for winter, including such topics as the falling of the leaves and the protection of the buds.

Preparation for Winter-Fall Leaf Study.

What changes take place in the leaves during the fall? When do they begin to change? Colors on different trees.

Study some of the friends and enemies of the leaves, the caterpillars which eat them, the spiders and caterpillars which roll or fold them up and make their home in them, the little miners which live between the two skins of the leaf. Many leaf miners are usually found in the oak leaves.

Have the children collect and press autumn leaves and notice their rich colors and the variations in color. Sift the children's thoughts to the beauties of autumn. Why — from the standpoint of the tree — do the leaves fall? All their nourishment has been used up and they can make no more plant food. They are too old to breathe for the tree. They are of no further use, except to make the tree look pretty. Why not have the leaves remain on the tree all winter?

Do the leaves separate from the tree at any one point on the leaf? Compare maple, box elder, sumac, and other leaves in this respect.

In some species of oak the leaves often remain on the tree all winter. Why? Notice the relation of the leaf stem to the bud. In the box-elder tree the leaf-stalks often remain until late in the winter. Why? Examine their base and the way in which they protect the buds. Notice the base of the stem of the maple leaf.

Is the work of the leaf done when it falls from the tree? What covers the seeds on the ground? Is that all that the fallen leaves do? What becomes of the fallen leaves? Have the children examine some partly decayed leaf mould. What does the leaf mould do? Of what use is it?

Review and have the children write the story of the leaf and its life and work.

Read some poem or story on the leaves. The following are good.

"How the Leaves Came Down." Susan Coolidge.

"The Anxious Leaf." Henry Ward Beecher.

"Talking in Their Sleep." Edith M. Thomas.

"The Dream of the Old Oak Tree." Hans Christian Anderson.

These can be found in "Little Flower Folks." (Educational Publishing Co. Boston.)

Preparation of the Buds for Winter.

Bud study belongs to the spring-time and should begin then, when the parts of the bud are most distinct. If the children have studied the spring buds, have them examine some large buds such as horse-chestnut, elder, and lilac, with special reference to the ways in which they are protected and prepared for winter.

Study of Rocks and Soil.

In November and December, when living nature cannot be so readily studied, it is well to turn to the rocks and soil. Suggestions will be given in the next number for the study of rocks and soil as a basis for geography.

During these October days the children should gather rocks for the winter work and go out of doors for the study of soils, and soil-making.

Gather enough rocks so that each pupil can have a piece of each kind. The more common rocks in your own vicinity are the best; the sandstones, composed of grains of sand cemented together; the lime rocks, recognized by their bubbling or effervescence, when acid (weak muriatic acid) is poured on them; the mud and clay rocks, not lime, such as the common slate, composed of fine material, like, mud or clay, hardened; and the igneous rocks, or those which have been melted, such as granite, usually crystalline in structure.

Shaler's First Book of Geology, Crosby's Common Minerals and Clapp's Observation Lessons on Minerals will be found very helpful in preparing for the rock study.

Field Lessons.

The study of soil as outlined below, as a preparation for geography, must be carried on out-of-doors. A few words in regard to field lessons will not be amiss here.

If properly conducted a field lesson is worth many lessons in the school-room; but it must not degenerate into a mere picnic. To be successful it must be with a definite object and must be very carefully planned. Two or three days beforehand the pupils should be prepared for it. Its special object should be stated and their interest aroused and thoughts turned in a definite channel by questions given them for investigation.

After the lesson take time to question them about what they have learned and to review and "clinch" what has been gained.

Soil and Soil-Making.

1. Study the evidences that the rocks are breaking to pieces or disintegrating. Examine the stone at the base of rocky cliffs, collect "rotten" stones from the fields and notice the evidences that rocks do crumble and become finer and finer.

2. Investigate the causes of this. Notice fissures in the rocks. Soak in water and break with a hammer to show how water has penetrated the rock. Investigate the effects of roots entering these fissures and growing and the effect of water freezing in the fissures. Illustrate the latter by freezing water in a bottle. Pour muriatic acid on mortar and notice result. The lime cementing material dissolves and the mortar falls to pieces. Pour acid on limestone (the encrustations from inside of tea-kettle will do.) Nearly all water in the earth contains a little acid which slowly dissolves the cementing material of rocks.

3. Study the kinds of soil. Examine sand. Formed from what kind of rock? How is mud formed? What gives it its dark color? Study soil under trees and notice the formation of black soil. Examine the soil in a cut and note the color of the soil near the surface and below. What is cause of difference?

ENTERTAINMENT

Concert Recitation.

(For the whole school.)

We are but minutes — little things —
Each one furnished with sixty wings,
With which we fly on our unseen track;
And not a minute ever comes back.

We are but minutes; yet each one bears
A little burden of joys and cares;
Take patiently the minutes of pain —
The worst of minutes cannot remain.

We are but minutes; yet we bring
A few of the drops from pleasure's spring,
Taste their sweetness while yet we stay —
It takes but a minute to fly away.

We are but minutes; use us well;
For how we are used we must one day tell.
Who uses minutes has hours to use;
Who loses minutes whole years must lose.—*Sel.*

Little Things.

"A crumb will feed a little bird,
A thought prevent an angry word,
A seed bring forth full many a flower,
A drop of rain foretell a shower.

A little cloud the sun will hide,
A dwarf may prove a giant's guide,
A narrow plank a safe bridge form,
A smile some cheerless spirit warm!"

What the Winds Say.

(Recitation by four divisions of the school.)

What does the *South* wind say
On a holiday?
It says: "Come out with me;
I'll chase you 'round the tree,
And toss your pretty curl;
Come out, my little girl!"

List what the *West* wind says
On the holiday.
It says: "My little man,
Just catch me if you can;
I'll hide behind the tree,
As still as still can be!"

Can't you hear the *North* wind say
On a holiday —
"See the tall oak as I come,
Toss its arms in jolly fun;
And the brown leaves whisk in glee,
Scat'ring off right merrily?"

Often doth an *East* wind say
On a holiday,
"Stay indoors, my child, and play,
For I send the rain to-day;
Storm or sunshine, all is well.
Everything God's love doth tell."

— *G. M. Howard.*

Recitation.

(For a very little girl.)

I've a dear little playmate;
Who is it? Now think.
Her dress it is white,
Her nose it is pink,
I don't like to handle her roughly, because
I think she carries pins in her paws.
I thought she was very dainty and neat,
But, Oh dear! she washes her face with her feet!

— *Annie Chase.*

Telling a secret.

Chestnuts Are Ripe!

By F. A. C.

Jack. I know something that you don't. Wouldn't you like to know what it is?

Kate. I don't believe it is much of a secret.

Jack. What'll you give me if I'll tell?

Kate. (*thoughtfully*) Let me see. I'll give you — I'll give you my best paper doll.

Jack. Ho! It's worth more than ten hundred dolls.

Kate. O Jack! Tell me quick or I shall cry.

Jack. Well, I will. (*impressively.*) Chestnuts are ripe! What do you think of *that?*

Kate. You don't say so! Where?

Jack. Down in the hollow behind the barn. The ground is covered with them. Say, Kate, what do you suppose makes them crack open?

Kate. Roasting, of course.

Jack. No, no! The burrs.

Kate. (*meditates.*) I suppose Jack Frost has a great big hammer, and when the nuts are ripe he swings his hammer, *so*, and pounds the burrs, and they pop open.

Jack. May be so. I shall believe it when I see the hammer.

Kate. Jack, there's one thing I don't know about. I don't know whether it is fair to take the nuts away from the squirrels.

Jack. Yes, it *is* fair. A boy or a girl is of more consequence than a squirrel. Besides, the squirrels have acorns too.

Kate. Yes, I know that; and hickory nuts. But don't you suppose they like chestnuts best?

Jack. I never asked, so I don't know.

Kate. Did you know that squirrels plant trees?

Jack. That's a likely story!

Kate. It's true. I don't mean that they get a spade and crowbar, and dig a hole, and set the tree into it. That isn't their way, but they do it all the same. And I know one thing. If the squirrels plant trees for us, I think it's fair to leave them some of the chestnuts.

The Number Lesson.

(Each child wears a band of colored paper on its head, cut high over the forehead to form a crown with the number in a different color pasted thereon.)

0

When left by myself I'm worth nothing,
As you have often been told,
But place me to the *right* of a number,
And its value increases ten-fold.

1

One single thing is always a unit,
We therefore write 1, as there's only 1 in it.

2

To get the *next* number, all we have to do.
Is to add two 1's together, and we have number 2.

3

Although I'm so little, just listen to me
While I add 2 and 1, or three 1's, to make 3.

4

Next add together, four 1's, or two 2's,
Or a 3 and 1 more, to make number 4.

5

Two 2's and a 1, or a 2 and a 3,
Or a 4 and a 1, make 5. Don't you see?

6

Two 3's, 5 and 1, or six 1's if you choose,
Or else 4 and 2, or three little 2's,
In pretty neat columns these numbers I'll fix,
And which ever I add, will bring number 6.

7

I am made of seven 1's, or a 2 and a five,
Or two 3's and 1 more, or a 3 and a 4,
This much I will tell, I am *four less* than 11,
Now I'm sure you will guess, and say number 7.

— *Emily J. Bresee.*

Bread-Crusts.

Did you have to eat the bread crusts
When you were a little girl?
Did your Grandma ever tell you
It would make your hair all curl?

If it's so, I'd like to know it,
If indeed it's really true.
Please to tell me if you ate them,
I'll be much obliged to you.

Would you have to eat a thousand
So they'd make your cheeks look red?
Does it tickle when it crinkles,
And the curls come on your head.

For my Grandma looks so funny
As she hands her crusts to me.
And she says she knows I'll eat them,
"Just the thing to have for tea."

— *Selected.*

Daisies on a Vacation.

"Oh, tell me, where are my daisies gone?
What can the summer have done
With all the flowers? For high and low
I can't find a single one!
I've searched and hunted the meadow through,
I ran 'way down to the brook,
And up to the orchard and over the hill;
There's nowhere else to look.
Are they dead, or are they hiding from me?
The meadow is bare and cold;
There's not so much as a clover left,
And all the buttercup's gold
Is scattered and lost; and the blue-eyed grass
Has run away with the rest.
I wonder how long they'll stay. After all,
Perhaps the Summer knows best
What to do for her children; and maybe they've gone
For a little vacation. Who knows?"

Autumn Time.

Sing a song of autumn time
When the golden grain is high,
When the blossoms blow and the sun in a glow
Sails over a cloudless sky.

Sing a song of autumn time
The ripest of the year,
When days are bright and hearts are light
And skies are blue and clear.

— *Selected.*

How Squirrels Travel.

"A dozen squirrels, red and gray,
Set forth to travel on a day.
'T was easy on the land to go;
To cross the streams what did they do?

Pieces of bark and woodmen's chips
Furnished them all with ready ships.
What did they use for oars or sails?
They curled aloft their bushy tails,
And every chip that squirrel bore
Was safely blown from shore to shore.

Four days they traveled, then they found
A grove where beech nuts did abound;
And there they staid, without any fear,
And happy lived for many a year."

Don't Fret.

"When it rains, and you hoped 'twould be pleasant;
When the thread knots up in your sewing;
When you're asked at a tea to be present,
And a toothache keeps you from going;
When all things look hopeless and dreary,
And your joy seems turned into sorrow;
Don't fret, but smile and be cheery;—
Perhaps there'll be sunshine to-morrow!"

Where the hazel bank is steepest,
Where the shadow lies the deepest,
Where the clustering nuts fall free,
That's the way for Billy and me.

— *Sel.*

(In this department teachers and editor will meet together for a social talk and exchange of opinions, experiences and suggestions. All that teachers would say of their work, if they were with a congenial company of other teachers will be in place here. Questions and letters to the editor will here receive attention and be treated in the best way to bring the greatest good to the greatest number.)

A Word from a Parent.

Dear Editor: —

Bless you for publishing that letter on "Literature for Babies," in the September number. I said *Amen* and *Amen* aloud when I finished it. *It is true.* I wish it had been printed in *red.* What have the blessed children of the kingdom of heaven to do with the bloody heathenism of the wild-oat period of the race? *They* ought to begin where Christ said, with the lilies and the sparrows,—where we *are* beginning *at last.*

If any teachers have settled convictions on the subject of Rachel Rexford's letter (above referred to), these columns are open for the expression of opinion. This reading for children is a vital matter for the next generation, and no teacher can conscientiouly afford to ignore the moral responsibility.

One Teacher.

One teacher writes concerning vacation:

We sat under the trees, opera glass in hand, watching the birds, after which the bird books were gotten out and much was laid up for the children about the bird world. A botany class was formed. Long walks and drives were the means of getting more good things for the children. We had a piazza club for star study, tracing the constellations with opera glass, comparing notes and authors read during the day. Did I get anything here for the children? Yes, much, even for first primary folks. Best of all, however, was the class for child study. I was the only student and my class for observation were a baby of eight months, another of fifteen months, a child two years old, and another four. My observations might not interest the general teacher, but to me the pleasure and interest were intense. I am ready for work. I have not thought *school* very much, but I have thought *children* a great deal. I have not learned to teach science to little children, but I know how to lead them to love Nature.

M.

We have a fancy that we should like to visit M's schoolroom after such a vacation, and that we should like to place little children in that room. One could feel very safe about a teacher who saw and felt everything *for the children.*

For where your treasure is, there will your heart be also.

Holiday Preparation.

An occasional protest is received from some anxious teacher that she does not receive her copy of this paper in season to use the matter found in it for holiday festivities. We can only repeat to such teachers what we have so often said before, that the most demoralizing thing that can happen to any school-room is to have the spirit of "getting up" a holiday entertainment enter into it. From that moment the ordinary routine work of the school is "flat, stale and unprofitable." Human nature plus child nature isn't equal to it. Wait till the very last moment before talking the matter over with the children. It is an occasion for rejoicing when we hear, now and then, that some principal has forbidden any teacher to use even a week of precious school time for preparation for an "occasion." If the upper grades cannot bear the excitement and distraction of it, what about the effect on the babies, who are upset by a breath of change or novelty? Don't do it, teachers.

For illustration: Next month comes Thanksgiving. Can't you decide to keep this festival in your own way? Can't you put the thanksgiving spirit into the little "good time" the day before, without that awful nerve-pulling, back-aching *drill,* which alone can make children perfect enough in execution of their various parts to give a regular advertised "entertainment" for visitors? PRIMARY EDUCATION will help with as many appropriate selections as space can be spared for. But make your own plans, teachers. Do not wait for any paper. Not one of them can meet the peculiar conditions of your school. Say to yourselves: "These children shall get a true idea of the thankfulness and gratitude that is due the Giver of all harvests and every good thing." Then go to the kindergarten and find out how they begin to create and foster this spirit beforehand in connection with their everyday work. They do these things beautifully, and we can well sit at their feet and learn of their delightful ways and means leading towards this result. Catch their *spirit* in this matter and then adapt it to your own children, and do not have the stereotyped program of just so much singing, so much speaking, etc., etc., that has always frozen up all spontaneity of feeling in schools at such times.

"Conservative!" "Critical!"

"I shouldn't expect to see *that* in PRIMARY EDUCATION I hear it is very conservative."

PRIMARY EDUCATION grows more and more critical every number. It will be as hard to get into it by and by as into the *Century* or *Harpers.*"

Both of these exclamations have reached the editorial desk, both from teachers and both from senders of manuscript which were returned to the writers. My dear teachers, dear contributors and dear reading public, we acknowledge both these accusations shielded with the panoply of honest pride that causes every such accusation to glance harmlessly off.

"Conservative?" Yes. The conservatism that watches every sentence that appears in this paper as a gardener watches for the possible intrusion of weeds.

"Critical?" Again, yes, and we proudly respond to this as to an encore. "Growing worse and worse every day?" Certainly. "Man was made to grow," says Browning, and we hope he meant the growth signified in *this* kind of "worse and worse."

The critical line in the acceptance of contributed matter is always drawn between the educational essay, the smoothly reading platitudes and the pithy warm-hearted messages full of the unmistakeable ring of *thought* and experience, even if these last have not one rhetorical virtue. No earnest soul, who has something helpful to say, and says it briefly and simply will be turned away from these columns even if the anatomy of every sentence has to be re-articulated before publication. But to those who have nothing to say and say it for the sake of seeing it in print our latch-string is not out.

Stamps, Please.

Among the many virtues which we claim for PRIMARY EDUCATION, one of the most prominent is the immediate editorial decision concerning contributions received. Notices of acceptance or rejection follow just as quickly, and in every case manuscripts are promptly returned to the writer when unavailable. Unfortunately the U. S. government has never seen fit to allow such matter to go through the mail *unstamped.* Will contributors remember this, and *enclose stamps* till such time as editors are included in the franking privilege?

Lowell on October Days.

. . . "As this world goes it is something to be able to say, 'I have been happy for two hours,' wrote Mr. Lowell one October day long ago in a letter to Professor Norton. 'I wanted to tell you, too, what glorious fall weather we are having, clear and champagney, the northwest wind crisping Fresh Pond to steel-blue. How I do love the earth! I feel it thrill under my feet. I feel somehow as if it were conscious of my love, as if something passed into my dancing blood from it, and I get rid of that dreadful duty-feeling, 'What-right-have-I-to-be?'"

STORIES.

Cat-Tails.

"You are very pretty," said the happy faced Marsh Marigold to the Cat-tails. "I like to watch your long blades waving in the wind; but I wish you had some of the rich gold Nature has given me."

"Never mind, dear Marsh Marigold," answered the Cat-tails. "It is quite enough for us to look down upon your glorious color. How bright you make this swampy place. We should be very dull without you."

Then the Marsh Marigold cuddled closer to the Cat-tails, and the Cat-tails bent very lovingly over her.

By and by the Marigolds all went to sleep. The Cat-tails grew taller and taller, and the velvety brown blossoms came.

One day a beautiful young lady came to the swamp. She had a sweet face; and people called her an artist.

"These beautiful rich brown Cat-tails!" said she, gathering an armful. "And this is the very swamp where we gathered those lovely Marsh Marigolds last spring."

Very carefully she carried the Cat-tails home. Then she tied a great rich orange bow about them and fastened them on the wall.

The Cat-tails were proud indeed; but when they looked around the room, what do you think they saw? Their old friends of the early spring as true as you live! The dear little Marsh Marigolds!

You and I would have said it was only a painted picture; but there are pictures that have souls, and surely this was one of them, for the Marsh Marigolds smiled across at the Cat-tails with just that same happy smile that the Cat-tails had so loved the spring before. M.

Friendly little cat-tails,
Growing close together,
Crowding marsh and shallow stream
Through all the autumn weather.

Strange, mysterious cat-tails,
Children's great delight,
Brown and velvety without,
Within all fluffy white!

Ned's Lesson.

There was once a colt named Ned, with a brown, silky coat, and beautiful brown eyes. Ned lived very near the railroad, and had seen the cars every day since he was a baby. He used to think they were queer things, but he was no more afraid of them than you are of a fly, for his mother had told him they did not do any harm.

But one day his young master tried to drive him across the track, and found to his surprise that Ned did not believe a colt ought to cross a railroad track. He just planted his feet firmly on the ground and would not take a step on the queer black sticks. How did he know they were strong enough to bear him?

Instead of whipping and scolding, Ned's master got down and coaxed him with a handful of oats. It was a whole hour before Ned made up his mind that he liked oats very much, and that perhaps the track would neither bite him nor break in two.

That was very good, but the best part of the story is that Ned's master never once lost his patience in the long hour. C.

Prue's Beautiful Leaves.

Prue had her hands full of bright oak and maple leaves, red, yellow, and green; when she saw some others, lovelier than any she had. They were on a vine that ran along a stone wall, and the leaves grew in threes. Some more of the same vine grew on a tree close by, climbing up the trunk by means of queer little brown threads that held fast.

The bright leaves seemed to say, "Come and pick me!" and Prue gathered ever so many, although she had to climb the wall to get the prettiest ones, and tore her dress, and scratched her hand in doing it. But what did that matter when the leaves were so beautiful? She got a few more just like them from the vine that was climbing up the tree, then hurried home to delight her mamma with the bright leaves.

What do you suppose Prue thought when her mamma, at sight of the leaves, looked very sober and said, "O, my dear, it is Poison Ivy. Drop it, quick!"

Prue dropped it without asking any questions, and her mamma put it in the fire with the tongs. But the mischief was done, and Prue could not get rid of Poison Ivy so easily.

If the poisonous plant could only have told its name!

Prue had plenty of time as she lay in her darkened room, to think just how it looks, with its leaves in threes, and little brown threads sometimes growing from the sides of the stem; and I think she will not pick any next year. C.

The Spider's Story.

"I was spinning a web in the rose-vine," said the spider, "and the little girl was sewing patchwork on the doorstep. Her thread knotted and her needle broke and her eyes were full of tears. 'I can't do it!' she cried, 'I can't! I can't!'

"Then her mother came and bade her look up at me. Now every time I spun a nice silky thread, and tried to fasten it from one branch to another, the wind blew and tore it away.

"This happened many times, but at last I made one that did not break, and fastened it close, and spun other threads to join it. Then mother smiled.

"'What a patient spider,' she said.

"The girl smiled too, and took up her work. And when the sun went down, there was a beautiful web in the rose-vine, and a square of beautiful patchwork on the step."

— *Babyland.*

The Fairies in the Kettle.

"Hum, hum! buzz, buzz! hum, hum!" You and I would have said the kettle was singing; but the birds knew better. They knew it was the busy hum and buzz of the Water fairies.

"Hurry, hurry, hurry," said they. "The Sun fairies are calling us. We see them dancing on the wall."

Then the Water fairies flew out — hundreds of them — from the spout of the kettle, and the big cover laughed and danced to see them go.

Out through the windows they ran, and straight up into the air they flew. It was a little cold up there, so they huddled close together; and when the birds looked up they saw a beautiful white cloud. "The Water fairies!" they sang; but no one knew what they saw in the cloud, as it sailed away across the sky.

By and by it stood over a very dry and dusty village. The corn was wilting, and the grains were hanging their golden heads.

"Here is work for us to do," said the Water fairies; so they came down, nearer and nearer, until the people saw a great black looking cloud just above them and over the fields.

"We shall have rain," said the people; then the Water fairies came hurrying and tumbling down. The corn and the grain were so glad! They held up their heads again and the wind came to have a frolic with them. And to think that nobody but the birds knew that these were the very same fairies that only a few days before had escaped from the big tea kettle! M.

The Willow and the Bee.

(These stories are adapted and arranged for supplementary reading by Mara L. Pratt)

"Good afternoon, Mrs. Willow," said a bright little bee as he hummed through the air, one day quite late in the fall.

"Good afternoon, Mr. Bee," answered Mrs. Willow bowing most gracefully towards her kind neighbor, "How do you do this fine sunshiny afternoon?

And how are your brother bees; and how is your beautiful queen?"

"We are all very well, Mrs. Willow. Very well and very busy too," hummed the bee politely.

"I have noticed that you have been very busy lately," said Mrs. Willow. "But will you not come and sit upon one of my branches and rest?"

"You are very kind, Mrs. Willow; and I shall be very glad to rest a little."

"You see, the queen has been so determined we should get our cells all filled with honey, that we have had hardly time to breathe.

"But we have finished our work now. Every cell is full; and we have been given this one day to rest and play in. Our Queen said we might not have another chance to play for a long time.

"I didn't know what she meant, for I'm a new bee — I only came out of my egg last spring — so I asked a drone what was going to happen.

"He told me that soon Jack Frost would come and bring the winter. Then we could not fly over the fields any more, but would have to stay in the hive till he went away, which would not be for a long, long time.

"O dear! I don't like it at all. I wish I were a willow tree, so I shouldn't have to be shut up.

"You have a pretty easy time, don't you, Mrs. Willow, with nothing to do all summer but let your leaves dance in the breezes?"

"Nothing to do! indeed, Mr. Bee!" exclaimed the willow tree. "Do you think a mother with as many children as I have can be very lazy?"

"Children!" cried the bee; "I didn't know you had any children!"

"That's because you're so young; but I have,— thousands of them all over this tree. There's a baby now right under you." The bee jumped.

"Under me! Why I don't see anything." Then looking closer he added, "There's nothing here but a little, hard, brown lump. That doesn't seem much like a baby!"

"Perhaps not, Mr. Bee," replied Mamma Willow; "but if you could look inside, you'd find one fast asleep, wrapped in fur from head to toe.

"Every day this summer, when you thought me playing, I was busy getting these fur coats ready for my wee ones. They are so cosy and warm now, in their snug little cradles, that they'll sleep soundly until spring comes."

"Well, that's very strange, Mrs. Willow! I didn't know you had so much to do. And will the babies stay there all winter?"

"Yes, to be sure they will, and be as quiet as little mice. You shouldn't think that you bees are the only ones who sleep during the cold weather. I, too, must have rest, and now that the babies are taken care of, I'm ready to stop working.

"Why, how chilly it is! Don't you think so, Mr. Bee? Why, there's old Northwind! I wondered what made me so sleepy. Now that he's come, I shouldn't be one bit surprised if Jack Frost were here this very night! You'll be wise to fly home before you get cold, my little neighbor!"

"Yes, I think I ought to go; I didn't know it was so late. Good night, Mrs. Willow! Sweet dreams to you and the babies!"

"Good night, Mr. Bee! Don't forget to come and see us all in the spring!"

"I'll remember," answered the bee; and away he flew to his hive in the garden.

Mrs. Willow was right, for Jack Frost did arrive in a very short time, and the bee was very glad to curl himself up in his warm little hive.

AMERICAN BOOK CO., BOSTON.

SCHOOL ENGLISH. By George P. Butler. 239 pages, 75 cents

This is a manual for use in connection with the written English work of secondary schools. The author has endeavored to present a logical classification of the best directions for avoiding errors and securing a good style. In connection with the stated rules there are given some ways in which this rule is most frequently violated, one or two examples are given and corrected, and other examples are added to be corrected by the pupil himself. These errors are often selected from pages of current magazines and daily papers. In this way a pupil can teach himself to write good English. The great need of some method by which young people in secondary and normal schools can increase their knowledge of the use of common English, which use was not acquired in early school days, is keenly felt by all who come into relation with them whether as teachers or in a business connection. More English and better English should be the war cry of everybody interested in modern education.

ENGLISH GRAMMAR FOR COMMON SCHOOLS. By Robert C. Metcalf, Supervisor of Schools, Boston, and Thomas Metcalf, Illinois State Normal University.

This text-book in grammar is based upon the supposition that the pupils have been first carefully trained in the use of language. The authors believe that grammar should be taught inductively and that pupils should, by previous study of the simple facts of language, reach the more difficult matters of construction and inflection. This work is arranged in three divisions. In Part I. are considered the usual construction of sentences, the use of words and their classification as parts of speech. Part II, Inflection and substitutes for inflection. Part III., Analysis. Frequent reviews are an important feature of the work. Those who are familiar with the belief and practice of the authors, in their methods of teaching this branch of study, will expect to find here many of the objectionable features of the ordinary grammar text-book eliminated.

ELEMENTS OF ALGEBRA. By Wm. J. Milne. President State Normal College, Albany, N. Y.

Just now when so much is being said of the enriched grammar courses, every new text-book bearing upon the subject will be regarded with keen interest. Several algebras have already been presented, but of the many we have seen, no one of them can surpass Prof. Milne's little book. So simple is it in its first pages, and so very gradual is the increase in difficulty that no teacher need fear the introduction of the study even into the intermediate grades if this may be the text-book used. The order of subjects has been changed about that those *interesting* to the child may come first in sequence, which of itself shows Prof. Milne to be a true teacher. Equations are introduced at the very beginning, thus arousing the child to the salient characteristics of the science even at the first. In looking through the pages, we find ourselves wanting to do the problems ourselves.

GINN & CO., BOSTON.

CITIZENSHIP. By Julius H. Seelye, D. D., LL. D.

Why should a primary teacher have any interest in a book on Citizenship? For the same reason that she should know a thousand things that she does not teach her children by the letter, but by the spirit. There is an aroma of intelligence about a teacher who reads and assimilates the best thought upon any and every subject that makes for breadth and culture. No one needs this atmosphere more than the primary teacher who does the most and best of her teaching unconsciously. Citizenship begins in the first year of school, and that teacher who appreciates most keenly the ideal of an American citizen will best leave her impress on the smallest children. The writer of this little book has endeavored to put something else into it beside a code of statutes and to recognize a broader foundation for human duties and rights Fellowship of man with brother man is here laid down as the first great essential of good government.

CHILDREN'S SECOND READER. By Ellen Cyr.

This new second reader is new in very truth. Not one more collection of indifferent stories arranged with reference to some grade demand of vowel sounds or syllables; but a genuinely new departure in reading for the children. All through the book, alternated with beautiful little nature stories, are readings from Longfellow and Whittier, bits of their poetry, incidents in their lives, and very finely executed illustrations of the author's themselves, their homes, and certain of their poems. Besides these illustrations there are many most beautiful soft half tones, and fresh new fanciful designs in trees and flowers, which will delight the artist's eye and serve to educate the taste of the little reader. Verily, the old time reading books are fast falling into disuse in the presence of the gems of literature that are now coming before the public.

D. APPLETON & CO., NEW YORK.

OUTLINES OF HOW TO STUDY GEOGRAPHY. By F. W. Parker, Principal of Cook County Normal School, (Ill.)

When Col. Parker touches the subject of geography, one almost expects to see the landscape spring into form and to hear the ripple of the brooks in their pebbly beds, so real does nature seem in his treatment of it as a living thing. Old geography definitions are meaningless husks after the child has learned to see for himself and to discover some of the secrets of hills, valleys and brook basins. In this little book of fifty-nine pages the author has made a complete syllabus for the study of geography, from which any school can build up a course of study in this branch, and not go wrong. It is solidly compact with suggestions. There are pages of questions without answers, that point the way to personal investigation and thoughtful research. A prominent feature of the book is the consideration of geographical truth in its relation to other subjects: — geology, mineralogy, meteorology, including mathematical geography, physics, chemistry, botany, zoölogy, evolution of man, ethnology, anthropology, political geography and history, geometry, arithmetic, art and language. This is a practical application of the author's oft repeated statement that geography is the foundation science.

In addition, there are careful directions in the art of chalk modeling or surface drawing (with illustrations) by Miss Heffron, teacher of art in Col. Parker's school, and suggestions for field sketching by Miss Gregory of the same school. The whole closes with an additional list of reference books for the teacher, not found in a previous list, in "How to Study Geography," by the same author. Such a complete compendium on this subject has never before appeared.

A. LOVELL & CO., NEW YORK.

VERTICAL WRITING. THE COMMON SENSE COPY BOOKS. A system of vertical penmanship, by Joseph V. Witherbee.

The author says: "The simplicity of the copies in this series, both in form and spacing, reduces the toil of both teacher and learner to a minimum. No. 1. Short words only. 2. Words, short sentences and all the capitals. 3. Reduces height of letters; sentences composed of maxims and proverbs. 4. Sentences composed of patriotic sentiments. 5. Two line copies. 6. Business forms. A tracing book also accompanies the series."

SILVER, BURDETT & CO., BOSTON.

WAYMARKS FOR TEACHERS WITH ILLUSTRATIVE LESSONS 274 pages. By Sarah L. Arnold, Supervisor of Primary Schools, Minneapolis.

In this book Miss Arnold gives broadcast to teachers many of her methods and plans of study in the primary schools of Minneapolis. The author's well-known reputation for skill in primary work will make this book generally sought after and thoroughly appreciated by the thousands of primary teachers who have learned to rely upon Miss Arnold for guidance and direction in the training of little children. The subjects of Nature Study, Language Lessons, Reading, Spelling, Geography, Number and Seat Work, are treated separately and are full of happy suggestions as to the best manner of presentation. These are followed by Talks on School Subjects, including Moods and Manners, Monday Mornings, Schoolroom Atmosphere, Programme, Lesson, and Discipline in the Schoolroom. The teacher who absorbs the lofty, earnest spirit of this book as it shines forth from every page, will look upon her work from a higher view point and be worth just so much more to herself, her work, and the world about her.

THE NORMAL REVIEW SYSTEM OF WRITING. Vertical copies. By D. M. Farley and W. B. Gunnison.

Regular course, six numbers. Short course, four numbers; Tracing course, two numbers; Movement course, two numbers; Business forms, one number.

Among the points of superiority of this system noted by the authors are these: Double copies on each page; different copies on each page; and, in addition, a presentation of methods of teaching this subject which have been heretofore ignored in this branch.

FIELD WORK IN NATURE STUDY. A Hand-Book for Teachers and Pupils. 55 pages. Published by the author, Wilbur S. Jackman, A.B., Teacher of Natural Science, Cook Co. Normal School, Chicago, Ill.

There is a vague idea existing in the minds of teachers who have heartily espoused the plans for Nature study in our public schools, that there ought to be some field work done, but there is no definite idea of what to do or how to do it, even if the patrons of the school approved, and the pupil were already in the field. Prof. Jackman has met this want exactly in this little book packed full of suggestiveness. After the necessary hints and directions for wise preparations, the work on the different topics for field study is laid out like the heads of a sermon. To teachers who are so fortunately located as to be able to carry their children to the heart of nature this richness of detail as to the best ways to find "sermons in stones and books in running brooks" will be most welcome. And to those without the courage to make the venture "to go a-field" the breadth and scope of the questioning will open up avenues for nature thoughts never before discovered. The division of themes is in this wise: General Outlook, River Basin, Soils, Swamp, Lake Shore, Botany, Zoology. A list of books pertinent to the subject, is also given, comprising the works of 57 different authors, which is a reason of itself for buying the book.

VITALIZED PHOSPHITES is indispensable to all children who would learn easily and retain what they learn. Every thought carries away a moiety of the vital energy of the brain, and if it is not resupplied there is brain hunger. Every child who is studying should take the VITALIZED PHOSPHITES daily during the study months; even with those who are making no special effort, a daily dose as an occasional nutriment will give an assured means of keeping up both growth and vigor

Remember, it is not a medicine, it is a special FOOD *to brain and nerves.*

See "ad" on page 295.